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0 GRFD

1 ANNUAL

5 REPORT

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FY 2016 FISCAL

CITY BUDGET	\$ 457,671,388
CITY GENERAL FUND	\$ 125,381,085
GRFD ADOPTED BUDGET.....	\$27,663,380

PERSONNEL

200 (YEAR END)	2015 PERSONNEL (100%)
174	OPERATIONS PERSONNEL (87%)
13.....	ADMIN. PERSONNEL (6.5%)
9.....	PREVENTION PERSONNEL (4.5%)
4	TRAINING PERSONNEL (2%)

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EMERGENCY OPERATIONS

30,270	APPARATUS RESPONSES
22,256 ..	EMERGENCY INCIDENTS (ALL TYPES)
14,792.....	EMERGENCY MEDICAL SERVICE
2,172	FIRES AND FIRE ALARMS
617	FIRES EXTINGUISHED
95.04%	PROPERTY SAVED RATE
\$158,686,798.....	PROPERTY SAVED VALUE
4.96%	PROPERTY LOST RATE
\$8,338,937	PROPERTY LOST VALUE
18	CIVILIAN INJURIES
1.....	CIVILIAN DEATHS
41	FIREFIGHTER INJURIES
0	FIREFIGHTER DEATHS

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FIRE CHIEF'S MESSAGE



This will be my last formal letter as the fire chief of this great organization as my retirement will be effective on January 09, 2016. I have been humbled and honored to serve our vibrant city and the dedicated men and women of this department for over 31 years. Although the last few years have been difficult for all of us due to the large amount of change that we have undergone, one thing remained constant: our willingness to do whatever it takes to ensure our citizens receive an excellent level of service from our organization.

Our days are extremely busy now, aligning with our core areas of response, training, prevention, wellness and support services. We are constantly looking at program outcomes and data to drive our decisions and make good use of our budget and our resources. This past year our citizens continued to receive personalized fire prevention services through our residential safety program, we took delivery of four new engines, refurbished three more and purchased a new aerial device. Many of you also spent countless hours on our accreditation process, which provides a roadmap for our organization to continue making improvements to our services, equipment and training.

This is the best fire department in the State of Michigan and can stand shoulder to shoulder with the best in the industry. I couldn't be more proud of you and what we have accomplished together. With my tenure as fire chief coming to an end, I just wanted to finish with two simple words; Thank You.

Laura L Knapp

Laura Knapp

Fire Chief (Ret.)

MISSION STATEMENT

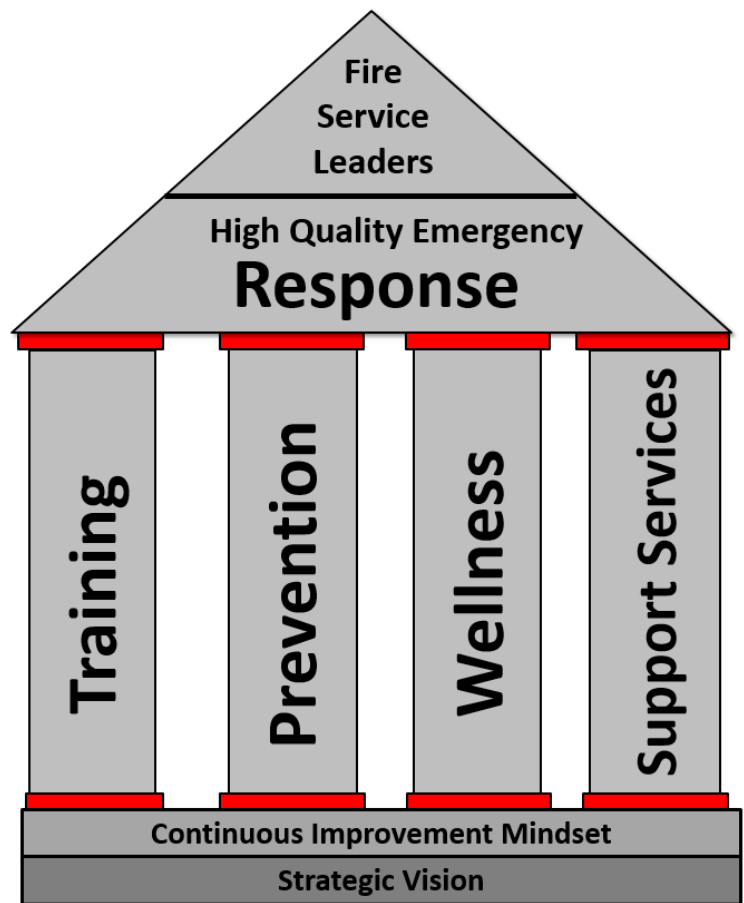
The GRFD will provide the highest level of service to our community through a commitment to excellence.

VISION STATEMENT

The GRFD strives to be an accredited national fire service leader that aligns with community needs and provides a secure work environment for its members. This is accomplished by diverse partnerships, increased adaptability, fluid communication, complete transparency and a preventative mindset towards all endeavors.

VALUE STATEMENT

THE GRFD IS
COMMITTED
TO DOING WHAT IS
RIGHT THROUGH:
HONESTY
INTEGRITY
LOYALTY
TEAMWORK
EXCELLENCE

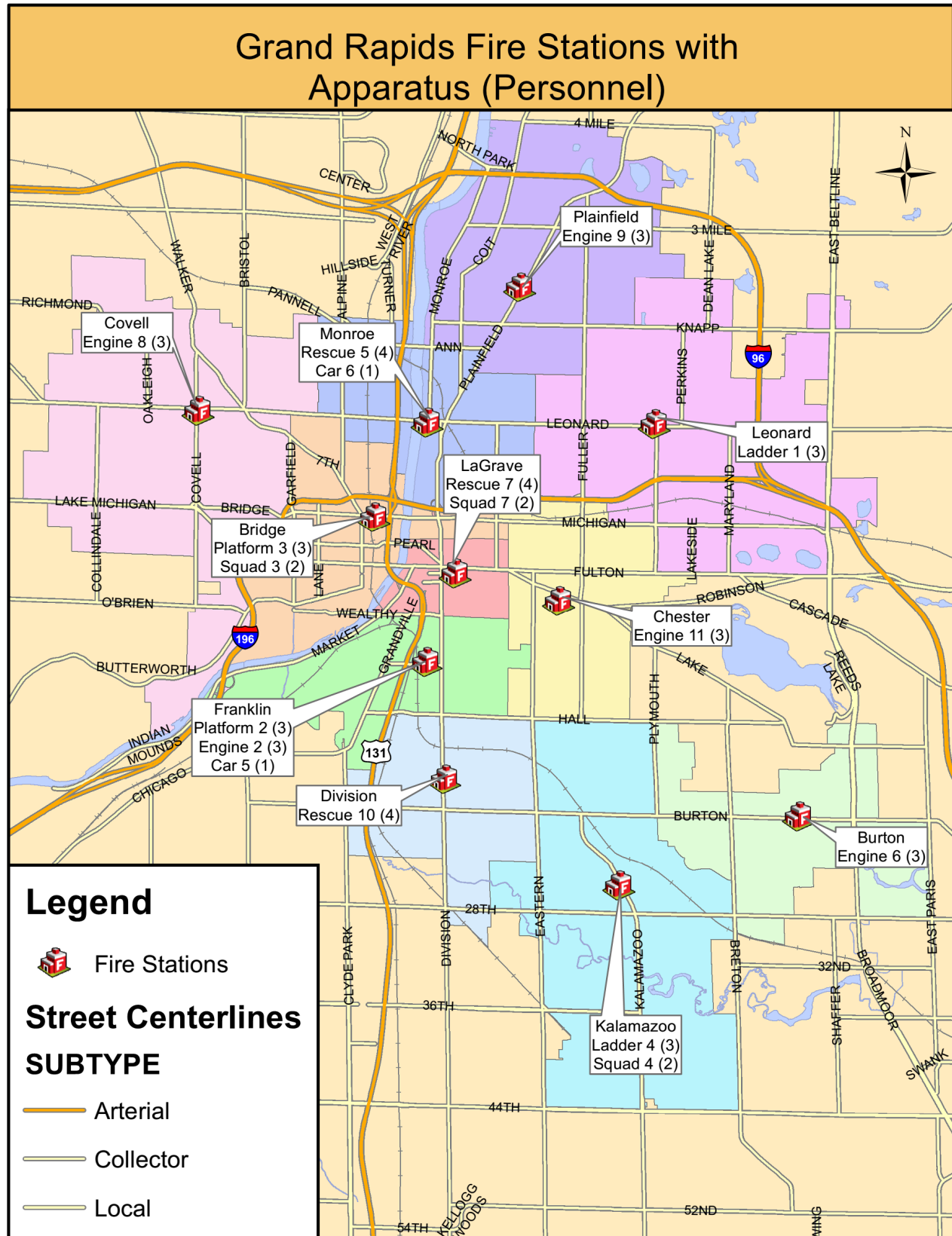


GRFD PILLARS



2015 GRFD JURISDICTIONAL MAP

WITH ASSIGNED APPARATUS/(PERSONNEL COUNTS)



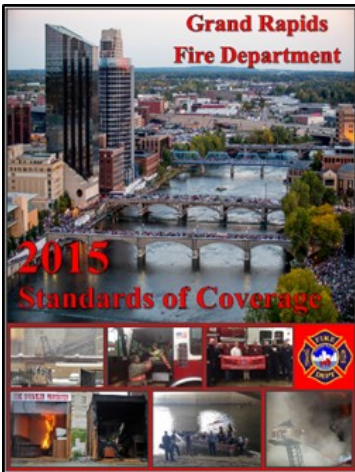
ADMINISTRATION

PLANNING DIVISION - INFORMATION TECHNOLOGY

PLANNING DIVISION

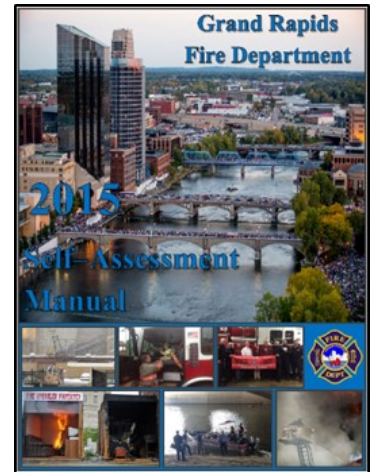
The strategic planning office spent a significant amount of time during 2015 steering the organization through the accreditation process administered by the Center for Public Safety Excellence. The work consisted of three main parts; a community driven strategic plan, a risk based standards of coverage (SOC) and a comprehensive self-assessment manual (SAM).

Although a core team met monthly to guide the process and manage the enormous amount of work, the entire department assisted with performing risk assessments, contributing to the 213 page SOC. As the organization is in the midst of a large amount of turnover, especially in higher ranking and program management positions,



it was perfect timing to write the 376 page SAM, which documents how the major functions of the GRFD are conducted, provides an appraisal of how well we are doing, and recommends a plan to make improvements.

In addition to hosting a successful peer assessment site visit for accreditation, the planning office continued to spend time working with the department's grant writer, FF Ryan Sparks, to provide data and input into the larger capital needs of the GRFD. Several meetings were held with FF Sparks, Mask Room technicians, and Training Division personnel to map out the successful implementation of new SCBA's during the early part of



2016. Next year the planning office will appear before the CPSE commission to represent the GRFD, facilitate an ISO site visit, and continue to deploy lean principles and practices throughout the organization.

INFORMATION TECHNOLOGY

Several developments took place in regards to IT during 2015, with iPads being rolled out to each station to perform risk assessments via an in-house customized application. The information collected was not only a vital part of the accreditation process, but will be imported into dispatch, so our crews can view it while enroute to an emergency.

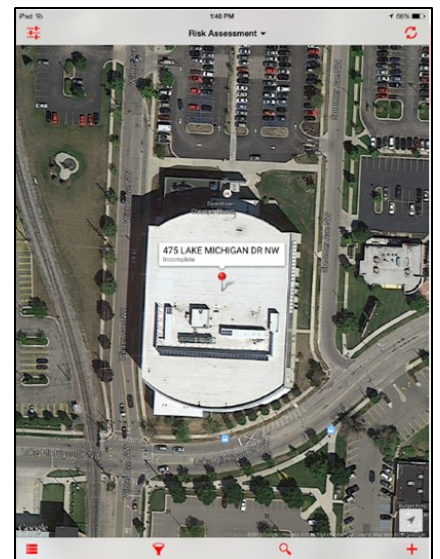


Another application began development during 2015 with the public-private partnership between the GRFD and HAAS alerting. This startup company is collaborating with the GRFD to perfect their application, which will alert drivers to an emergency vehicle in their area, making the roads safer for

citizens and first responders. Work will continue during 2016 to make this a viable application with huge safety benefits.

Other projects included:

- TeleStaff was upgraded to the latest version of WebStaff, allowing full functionality between desktop and mobile platforms.
- Station computers were upgraded to Office 2013.
- All station networks were upgraded to either fiber or MetroE.
- Vimeo was rolled out, providing a video library service to replace VLADY.



SUPPORT SERVICES

HUMAN RESOURCES— FISCAL SERVICES— MAINTENANCE—PPE—PREVENTION



With the retirement of Deputy Chief Kevin Sehlmeier, I have assumed the duties of Acting Deputy Chief of Support Services. I look forward to providing guidance for the GRFD in the areas of Human Resources, Fiscal Services, the Maintenance Division, PPE and Fire Prevention.

HUMAN RESOURCES

The GRFD started 2015 with 199 employees. Between the hiring of 14 recruits and the retirement of 13 of our personnel, the department ended the year with 200 members. 24 promotions were made throughout the year as well, providing professional advancement for nearly 12% of our personnel.

FISCAL SERVICES

The GRFD amended budget for fiscal year 2015 came in at \$28,638,256. Total budget funds utilized in FY2015 or carried forward to the FY2016 budget year resulted in the department being 1.26% under budget for FY2015. The amended budget for FY2016 began at \$27,663,380.

MAINTENANCE

As part of the City's system wide Asset Management Plan, the GRFD coordinated with GMB Architecture and Engineering to conduct an assessment of all department facilities. Working through this process deferred the implementation of some planned capital projects.

In accordance with the Apparatus Reset Plan, the department received four new Rosenbauer pumpers and also took possession of one Rosenbauer aerial. Three Ferrara pumpers were sent out for refurbishment, and several decommissioned pieces of apparatus were sold.

PPE

The Grand Rapids Fire Department was awarded a FEMA Assistance to Firefighter Grant to replace our entire inventory of SCBA's. The changeover of equipment for this program will occur in 2016. 94 sets of turn-out gear and washers and dryers for PPE were purchased in 2015.

PREVENTION

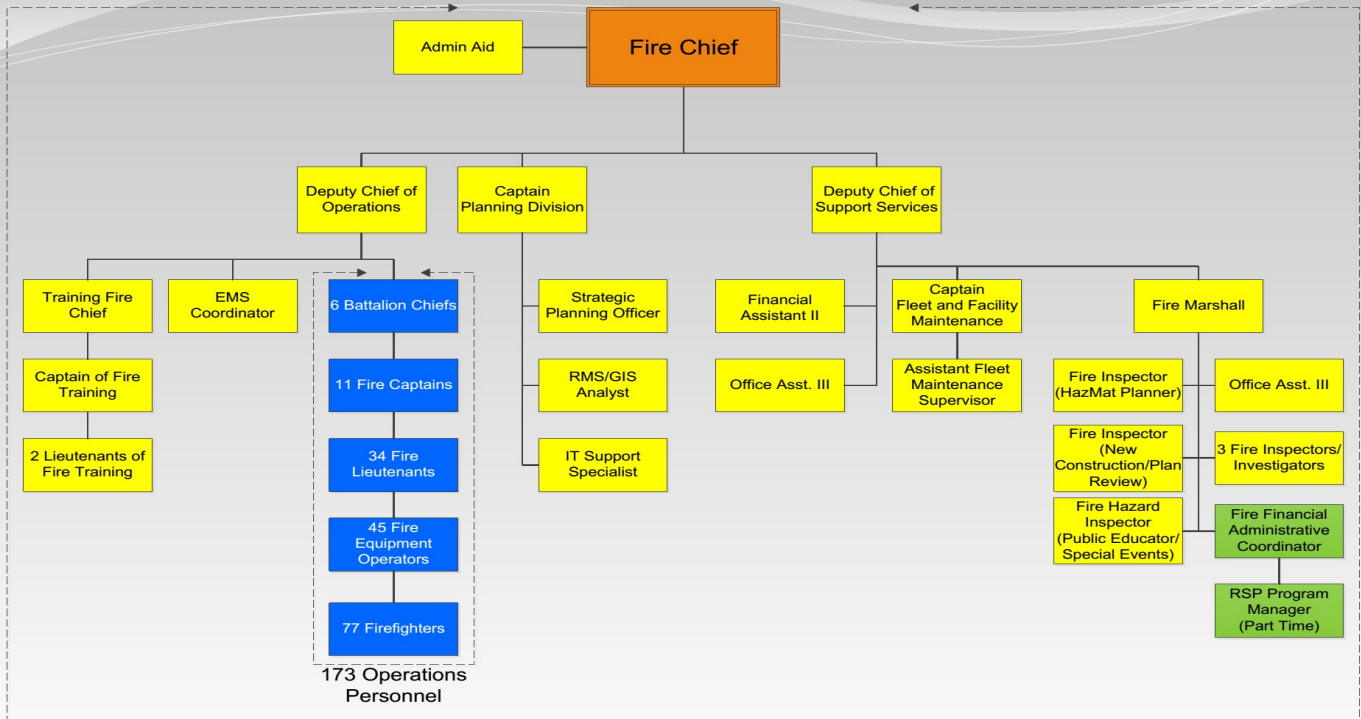
The Prevention Bureau provides a wide range of services including; New Construction/Plan Review, Fire Inspections, Fire Investigations, and Public Education. The Residential Safety Program continues to deliver home safety education and smoke alarms for the citizens of Grand Rapids.

Thank you,

A/Deputy Chief Ron Tennant

2015 ORGANIZATIONAL CHART

GRFD 2015 Organizational Chart



199 Total Personnel, 173 Operations Personnel, 26 Administration Personnel
+ 1.5 Residential Safety Program Contracted Employees



HUMAN RESOURCES CONT'D

13 personnel concluded their service with the GRFD during 2015. We wish them good luck in their future endeavors:

E.O. Mike Uzarski	01/27
Capt. Paul Lang	03/13
E.O. Randy Hillman	03/18
B.C. Dennis Haisma	03/28
F.F. Michael Campbell	05/22
F.F. Ed DeMaagd	06/01
E.O. Marty Ogrodzinski	07/14
E.O. Gary Dredge	07/20
Lt. Donna Hillman	07/29
Lt. Dan Witwer	08/10
Lt. Ron Sabin	08/22
Lt. Gerald Miller	10/19
Lt. Dan Davis	10/22

FISCAL SERVICES

FY2015 began with an amended Fire Department general fund budget of \$28,169,250 in expenses and \$469,006 in capital funds. Revenue received in FY2015 was \$577,265 from fees and State funding and \$1,606,671 from the Income Tax and Income Tax Reserve funds. Total budget funds utilized in FY2015 or carried forward to the FY2016 budget year resulted in the department being 1.26% under budget for FY2015.

FY2016 began with a general fund budget of \$27,167,536 and \$495,844 in capital funds for a budget of \$27,663,380. We also received approval to carry forward \$226,818 from the FY2015 budget for projects that were not completed in FY2015. In September 2015, the GRFD sold a decommissioned reserve Aerial Truck for \$118,000. In October 2015, GRFD received a FEMA grant award in the amount of \$1,300,000 for SCBA equipment. The estimated revenue of \$3,313,756 is a combination of fees, State funding, Apparatus Capital Reserve funds, Income Tax Reserve funding, SCBA Grant, and the sale of decommissioned fire apparatus. The first half of FY2016 closed with approximately 53.1% of the amended budget remaining and 51% of projected revenues having been received.

24 personnel received promotions within the GRFD during 2015:

Battalion Chief

Battalion Chief Todd VanderWall 04/30

Fire Marshal

Fire Marshal Eric Dokter 04/30

Captains

Fire Captain Kevin Carmel 01/22

Fire Captain Jack Johnson 04/09

Fire Captain Eric Freeman 07/06

Fire Captain — Training Wes Kelley 08/13

Lieutenants

Fire Lt. Harold Elmore 03/10

Hazardous Materials Planner Jason Kelley 04/07

Fire Prevention Inspector William Smith 04/13

Strategic Planning Officer Scott Gray 04/16

Fire Prevention Inspector Donald Gerkey 05/20

Fire Lt. Keith Borreson 08/19

Fire Lt. Ed Braman 09/25

Fire Lt. William Smith 11/12

Fire Lt. Matt Keusch 11/23

Fire Lt. Mark Penning 11/25

Fire Lt. — Training Steve Lohman 12/11

Fire Lt. — Training Justin Holmes 12/11

Equipment Operators

E.O. Cory Kernodle 03/03

E.O. James Hillman 03/03

E.O. Lou Houtman 07/13

E.O. Nathan Bazen 08/13

E.O. Joshua Veldkamp 09/08

E.O. Jason Zamarron 10/29



Final Fiscal Plan FY 2016 - 2020

MAINTENANCE – CAPTAIN HENDGES

Four Rosenbauer CAFS pumpers were delivered in 2015, as well as a Rosenbauer aerial apparatus with Class A foam. Three Ferrara pumps were sent to Renewed Performance in Tipton, In. for repurposing, and are now returned to service. The repurposing involved the removal of the body from the chassis, rebuilding or replacing components to extend the service life of the apparatus, and adding a Class A foam system. One of the three was converted to a dedicated reserve rescue with additional compartmentation and storage for hydraulic tools.



GMB conducted a facilities assessment and asset inventory. An Asset Management Program (AMP) was developed based on the results. The AMP provides a detailed report and timeline for the projected maintenance and replacement costs. A report was prepared for the department which provided a breakdown of facility elements that will need repair or replacement and a timeline for those items.

We installed the washing machines for PPE, but otherwise mostly small projects such as painting or regular maintenance were completed due to the pending arrival of the Asset Management Plan.

Other projects for 2015:

- Station furniture and mattresses were replaced
- New smooth-bore nozzles for the CAFS engines
- Upgrades to the conference room
- Improvements to the HVAC system at LaGrave
- Sold 3 apparatus, 2 engines and 1 platform
- Purchased new hose for two apparatus
- Replaced several conventional fleet automobiles with hybrid gas/electric cars
- Station and apparatus folders were created for tracking maintenance.



PERSONAL PROTECTIVE EQUIPMENT (PPE)

The GRFD received a federal Assistance to Firefighters Grant in 2015 which will fund the replacement of all SCBA's, individual face pieces, air cylinders and the breathing air compressor system. The consensus of the testing group led to a decision to remain with Scott Safety as our SCBA supplier.

94 sets of turn-out gear were purchased for members in 2015. In addition, washers and dryers for PPE were purchased and installed in every station and the training center. Funding was also set aside to purchase washers and dryers for uniforms, enabling members to reduce their exposure to potential carcinogens.

FIRE PREVENTION FIRE INSPECTIONS – PLAN REVIEW

PUBLIC EDUCATION – RESIDENTIAL SAFETY PROGRAM – FIRE INVESTIGATIONS



FIRE MARSHAL ERIC DOKTER

FIRE INSPECTIONS

The Fire Prevention Bureau focuses inspection efforts to support the overall GRFD risk assessment. In 2015, the bureau's existing building inspectors continued to focus on the city's highest risk buildings and processes through the bureau's Operational Permit program. Existing building staff and office staff also work to administer the maintenance of installed fire protection systems throughout the city as a part of the GRFD's Fire & Life Safety Program.

- 1842 inspection activities were conducted in existing buildings; a 11% increase due to an enhanced focus on procedures and efficient methods in the first half of the year. (The second half showed a decrease due to reduced capacity [Fire Captain-Prevention position defunded].)
- 421 of the above inspections were follow-up inspections for non-compliant or late Fire & Life Safety system reports
- All ArtPrize venues (over 160 locations) were inspected over a week in Early September
- On seven evenings in 2015, after-hour nightclub inspections were conducted to ensure adequate crowd management, and guard against overcrowding in approximately 88 venues

CONSTRUCTION/PLAN REVIEW

Our Fire prevention staff continues to provide technical expertise in the area of fire protection system installation and acceptance for new building and remodeling projects. This application of fire protection technical expertise begins in pre-construction meetings with builders and developers, continues through system plan reviews and consultation with contractors, and culminates with the acceptance inspection and testing of the installed systems. During this whole process GRFD fire inspectors work closely with City personnel from a variety of different departments in order to provide as seamless an integration of services as possible.

- Preconstruction, on-site consultation, inter-departmental, and Design Team meetings
- Due to the increase in construction, more than 500 Fire Alarm and suppression system plan reviews were performed, an increase of about 30% over 2014
- Due to the increase in construction, approximately 650 Fire Alarm and suppression system rough-in and final inspections were performed, an increase of about 85% over the previous year!



PUBLIC EDUCATION

The GRFD regularly educates the public about fire safety. In addition to our Home Safety Assessments, our firefighters frequent block parties, make school visits, and attend festivals and trade shows to spread the word about smoke alarms and fire safety.

During Fire Safety Month, and even into December, our fire crews reached out to all of the second graders in schools near their fire stations to talk about the fact that matches are “tools for adults” and to bring them to a responsible older person if found around the house. We had a lot of fun “Stop-Drop and Rolling”; and we talked about smoke alarms, the loud sound they make, and what to do if they hear the smoke alarm in their house sounding. Over the course of that time, we were able to reach over 2000 of our future fire-safe citizens.



In 2015, Bill VanderVennen, our chaplain and a former volunteer firefighter, delivered our Senior Fire Safety Program message to more than 545 of our senior citizens in the city's many retirement communities and churches. These tailored, interactive presentations serve as a great awareness builder and reminder for our more seasoned citizens.

FIRE MATCH - LT. HAROLD ELMORE

Last year was a very busy year for the Fire Match program, because of the efforts to become the "go to" delinquent fire setting program in Kent County. In 2015, the Fire Match program's goal was to reach into the areas of fire setting that are traditionally missed nationwide. Those areas of interest are the judicial system, foster care, health services, and the general population that has undocumented fire setting. The Fire Match program advanced in those efforts by partnering with Kent County Prosecutor Vicki Siedl and the Kent County Probation Department. Next, the Fire Match program has moved forward with trying to identify some of the undocumented fire setting in the city of Grand Rapids. We've done this by adding a question regarding fire setting tendencies on the "Residential Safety Programs" owner questionnaire. This simple question allows the fire staff to inform the home owner of the help that is available through the Fire Match program for a child that may be experimenting with fire setting in or around the home. The Fire Match program also made contact with the largest foster care facility (Bethany Christian) in the area and presented the Fire Match program to them. Being able to work with all of these community partners is paramount for reaching the fire setters that are typically missed nationwide in these areas.

Last year the program counseled and educated 18 fire setters. While the majority of the fire setters were from the city of Grand Rapids, we also had participants from the neighboring cities of Wyoming, Kentwood, Rockford and a participant that resides in Ionia County. At the close of the year, the Fire Match program is proud to report that 100% of our fire setters have not returned to their previous fire setting activity (includes fire setters from previous years that finished the program in the year of 2015). This is a definite indicator of the overall effectiveness of this program.

RESIDENTIAL SAFETY PROGRAM

The Residential Safety Program continues to support the department's federally funded, home safety assessments, which gets out our fire safety message and installs smoke alarms through our on-duty fire crews.

- Home Safety Assessments were conducted in 1,655 homes, with 10,450 smoke alarms installed
- 462 of the homes we assessed (28%) did not have a working smoke alarm and 75% of the homes had less than two working smoke alarms installed. For comparison, the average home requires between 6 and 7 smoke alarms for proper protection.
- The Residential Safety Trailer program was inaugurated and presented to children in a variety of venues by GRFD and American Red Cross personnel
- Smoke alarm purchases were funded by a federal FEMA grant and installed by on-duty GRFD fire crews

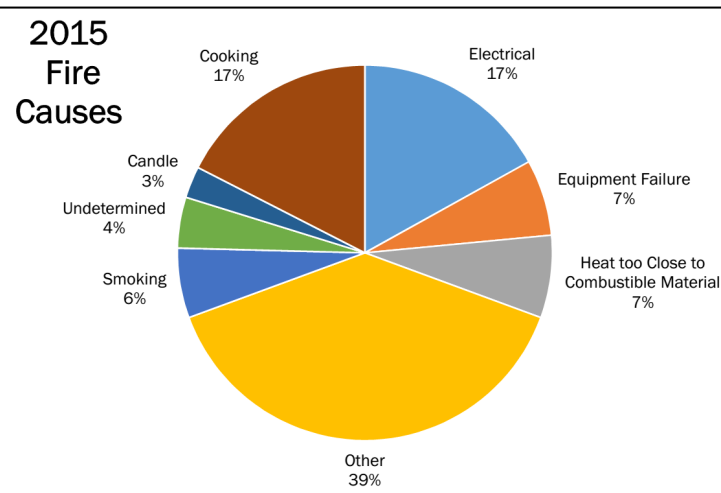


FIRE INVESTIGATIONS

Fire inspectors are trained by the Michigan State Police or at the National Fire Academy to provide origin and cause determination. While the identification of intentionally set fires is a very important component of the reason fire investigations are conducted, identifying the cause of even accidental fires assists the fire department in formulating its approach to the development of its overall fire prevention message.

In 2015, GRFD fire inspectors performed 47 fire investigations, including one fatal incident. The leading causes of fire in Grand Rapids are outlined in the accompanying table.

Support is provided to our fire investigation efforts by the Grand Rapids Police Department, Kent County Sheriff's Department, The Federal Bureau of Alcohol, Tobacco, Firearms, and Explosives, and the Michigan State Police.



OPERATIONS

BATTALION FIRE CHIEFS - EMS

GRFD TRAINING – GRFD REGIONAL TRAINING CENTER



DEPUTY FIRE CHIEF MARGARET FELIX

The men and women of the Grand Rapids Fire Department responded to 22,256 incidents in 2015. This constitutes another year of increased opportunities to provide positive outcomes in emergency situations for the citizens of Grand Rapids and its surrounding communities.

The Training Division held our first recruit class since 2011. 14 new firefighters were added to the suppression ranks. These firefighters graduated the training academy well versed in firefighting, medical, river rescue and confined space rescue. The Training Division also concentrated on the new Rosenbauer CAFS engines. These four engines were placed into service in May and June. The new Rosenbauer Aerial Ladder arrived in August and again all suppression personnel were trained on this new equipment. Numerous SOG's for training were updated and revised to the current best practices.

2015 brought a new work schedule that opened the evening up for training or Residential Safety Program appointments. This work schedule was a cultural shift and created many administrative challenges, but also offered an increase in opportunities to serve the citizens of Grand Rapids.

In 2015, the Operations Division bolstered the activities of the Fire Prevention Bureau in several areas. Suppression personnel participated in performing risk assessments for 1,897 buildings. These assessments were performed to support the accreditation process, and will also provide documentation as pre-plans for upcoming ISO evaluations. The crews were also active participants in the Residential Safety Program, educating and informing our citizens about hazards present in their homes while simultaneously installing 10,450 smoke alarms in 1,655 residences. Suppression crews presented fire safety practices to second-grade students throughout the City of Grand Rapids and were also scheduled for a large number of block parties for the citizens as part of National Night Out.

The monthly officers meetings continued in 2015 with the Battalion Chiefs leading strategies and tactics sessions. This training resulted in skill improvements for the officer ranks, providing organizational consistency following the vast quantity of promotions we had in 2014 and 2015.

The Operations Division worked closely with the Emergency Communications Center to enhance dispatch operations for the department. The Effective Response Force for each type of incident as shown in the Standards of Coverage was confirmed in the dispatch assignments. Testing is underway for Automatic Vehicle Location (AVL) dispatching, which will send the closest unit to the incident. This improved dispatching method will be a huge step in the progressive improvement and transformation of the Grand Rapids Fire Department.

The Suppression ranks fulfilled their daily assignments of a fire prevention activity, a training objective, responding timely to all incidents and continued focus on their fitness and mental health abilities. I am honored by their commitment to the citizens of Grand Rapids and the department.

EMERGENCY MEDICAL SERVICES - (EMS) COORDINATOR



CAPTAIN MARK FANKHAUSER

The professional delivery of Emergency Medical Services (EMS) is one of the many service platforms that the Grand Rapids Fire Department strives to provide for the citizens and visitors of Grand Rapids. The EMS program operates under the proven practice that high quality training and education will transfer into high quality patient care. Our department is licensed with the State of Michigan as a Medical First Responder (MFR) Agency and is compliant with Kent County Emergency Medical Services, the regional Medical Control Authority. The GRFD has 27 apparatus and 189 personnel licensed by the Michigan Department of Licensing and Regulatory Affairs. In addition, a professional relationship between the GRFD and the Michigan Department of Health and Human Services – EMS Section

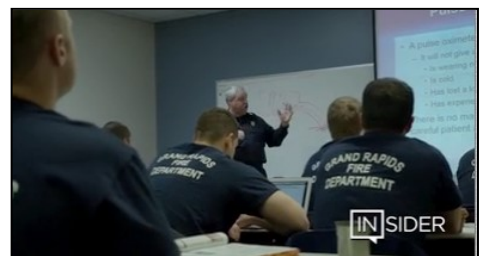
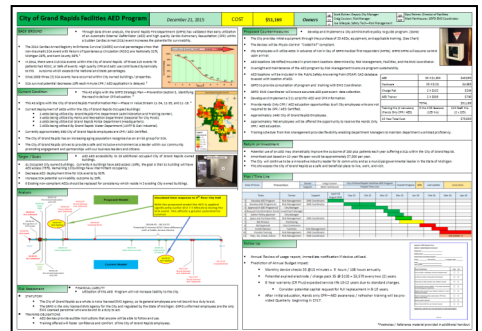
ensures compliance with regulatory and industry driven best practices.

2015 Medical Licensure Levels	2015 EMS Training Statistics
13 Licensed EMS Instructor Coordinators	104 Hands On Training Sessions
19 Licensed Paramedics	2,457 Online EMS Training Sessions
40 Licensed EMTs	3,242 hours of EMS Department Education
130 Licensed Medical First Responders	80 hours Community based EMS Education
100 MDHHS Licensure Renewals	4 Multi Agency Training Opportunities
10 MDHHS Licensure Audits	212 Hours of EMS I/C Education

The GRFD responded to 14,792 requests for medical service in 2015 accounting for 66.46% of the total call volume. Sudden cardiac arrests were targeted again this year for Quality Assurance review, with data indicating that 86 out of 228 documented arrests experienced a return of spontaneous circulation (ROSC) pre-hospital for a potential survival rate of 38%. Nasal Naloxone, which was implemented in October, has proven a successful addition to the scope of practice for the MFR.

Several significant events occurred in 2015 that stand as a testimony to our high standard of care and community involvement:

- Awarded the American Heart Association Young Investigator Award for the Pupillometry Study
- Participation last summer in Operation Northern Exposure - a multi-jurisdictional / military exercise that enabled a greater understanding of departmental resource potential.
- An automated external defibrillator (AED) program for public access in city buildings was designed and implemented utilizing the A3 problem solving tool.
- Renewal of Michigan Department of Health and Human Services vehicle licensure
- Committee involvement with the Kent County Ambulance Consortium group
- Implementation of a LEAN 5S concept for EMS equipment inventory and supply handling
- A community based CPR initiative with the Ottawa Hills High School 9th grade class
- Partnership and development of education and training with AMR – West Michigan
- 5 Medical Service Awards to GRFD personnel



BATTALION FIRE CHIEFS

The Battalion Chiefs coordinate and supervise the daily operations of the fire department. The Chiefs are located at Monroe Ave. Station (North Battalion) and Franklin St. Station (South Battalion). The North Chief supervises the operations of Leonard, Bridge, Monroe, LaGrave, Covell and Plainfield Stations, while the South Chief supervises the operations of Franklin, Kalamazoo, Burton, Division and Chester Stations.

Battalion Chiefs serve as the Incident Commander at any large scale incident such as a structure fire, vehicle extrication, confined space incident, hazardous materials incident or other event typically requiring 3 or more responding units. A Battalion Chief may also assist at an incident as a Safety Officer, Operations Officer, Branch Director, or as a Division/Group Supervisor as determined by the Incident Commander.



Battalion Chiefs have a variety of administrative duties which include the following:

- Coordinating the daily staffing of suppression personnel for the entire department. The South Chief determines overages and vacancies for suppression units for the oncoming shift, and balances personnel accordingly to meet the needs of the staffing matrix as determined by the department Standards of Coverage.
- Conducting a daily Live Meeting via Skype to coordinate suppression activities. The North Chief conducts the meeting at the start of each duty day. Information is shared regarding special events in the city, apparatus readiness status, weather conditions, river conditions, road closures, safety items, communications from administration and shift changeovers.
- Conducting training events with personnel in the battalion. Battalion Chiefs meet with personnel in the battalion on a monthly basis to engage in incident scenarios with the crews. The training could be a presentation on a particular topic, a simulated scenario, or a training evolution.
- Promoting a continuous improvement mindset. Chiefs coordinate an After Action Review (AAR) with the responding crews on all large scale incidents to take a critical look at how the events of the incident unfolded. The Battalion Chief writes a review that details which actions went well and areas of improvement that need to be addressed. The information is forwarded to the Deputy Chief of Operations in order to implement improved training or possible policy changes.
- Meeting with suppression personnel to foster department communication and problem solving. Chiefs schedule a monthly meeting with the station officer and crew to discuss current issues and concerns. The group works together to identify obstacles and generate solutions to problems or concerns. This process was very evident in 2015 with the implementation and subsequent redesign of the department's Managing for Daily Improvement (MDI) boards located in each station.



NORTH BATTALION - BATTALION FIRE CHIEF BART PERRY

CRITICAL INCIDENT STRESS MANAGEMENT (CISM)

Operating as part of the “Wellness Pillar” of the GRFD, Critical Incident Stress Management (CISM) is a formal, professionally recognized process for helping first responders of all professions who are exposed to traumatic events. Also known as “psychological first aid” this confidential process in the GRFD is facilitated through a peer support group of 11 volunteers trained to deliver pre-crisis education and awareness, as well as post event defusing for our personnel. Although, full “defusing” and “debriefing” continue to be rare events, GRFD team coordinators maintain a department wide situational awareness for all events responded to, making follow up contact with department members on an individual or crew basis, depending on the type of event responded to and / or referral. The CISM team continues to volunteer as a 24-hour a day point of contact for all members with emotional and mental health needs. In 2015, we continued to build on the successes of the previous year by offering 7 additional cumulative stress awareness initiatives for department members and their families. We are proud to be able to say that this awareness training was collaboratively provided by The City of Grand Rapids and the IAFF Local 366. Succession planning, expanded team membership, and enhanced training initiatives were also important planning issues for our CISM program. Additionally, we are meeting on a regular basis with the City of Grand Rapids Employee Assistance Provider (Encompass) to ensure the unique mental health needs of our firefighters and their families are being met.

SELF CONTAINED BREATHING APPARATUS (SCBA) - CAPTAIN CRAIG VANDERWALL

The GRFD received a federal Assistance to Firefighters Grant in 2015 which will fund the replacement of all SCBA's, Rapid Intervention Kits, individual face pieces, air cylinders, and the air compressor system. A team was assembled to ensure the grant purchases were conducted in a timely manner, and input on the selection of SCBA's was gathered from all levels of the department. Multiple manufacturers participated in the selection process, and the consensus of the testing group led to a decision to remain with Scott Safety as our SCBA supplier.

The Grand Rapids Fire Department maintains a strict respiratory protection program. A dedicated team of 9 personnel, trained to the industry recognized level of Technician status, are in charge of repairs, testing and management of the SCBA program. Annual face piece fit testing, a MIOSHA requirement, continues to be managed by the crews of the Burton Street and Covell Avenue fire stations.





NORTH BATTALION - BATTALION FIRE CHIEF RON TENNANT

SAFETY COMMITTEE

It gives me a great deal of pleasure to submit this final report for the year 2015. The members of Grand Rapids Fire Department Safety Committee are committed to assisting in providing the safest working environment possible to the members of the Grand Rapids Fire Department.

2015 Activities:

- Conducted one formalized, extensive injury review
- Submitted two reports to the Firefighter Near Miss reporting service
- Produced and provided hydration and cancer awareness training for the “Stand-Down for Firefighter Safety” week.
- Worked extensively with the Michigan Department of Transportation, Michigan State Police, and local tow companies to enhance the capability of more quickly clearing highway emergencies, especially in the US-131 S Curve, as well as enhancing our line of sight deployment methods
- Participated in the selection process and evaluation of new Self Contained Breathing Apparatus
- Ensured engine houses are equipped with adequate Carbon Monoxide detection equipment
- Posted A3 sized Fitness Safety Reminder posters at department physical fitness facilities
- An improved seat for Utility 2 was researched, procured and installed
- Vehicle exhaust concerns in the stations were addressed – reference Utility 2 and the Heavy Rescue
- Assessed a hazardous condition in a Fire Department storage area
- Assessed personnel identification via face piece marking systems
- Worked to enhance the provision of providing for the efficient hydration of personnel at emergency incidents
- Annually we assess our mission as outlined by the Labor Agreement between the City and the IAFF Local 366 to ensure that we are doing what we have been created to do
- For many of the concerns raised by individual members, we point them to the Chain of Command if that has not been attempted yet. We encourage them to come to us only if the system is not addressing their concerns.
- We still seem to struggle with consistently reliable Accident Reporting. We will be working closely with Risk Management and fire administration so we can more accurately track and review these incidents
- SCBA release handles in new style apparatus seats
- Ride quality in new apparatus
- Uniform Air Connection Cover concerns
- Firefighter’s Turn Out Gear and Glove evaluation and procurement
- Review of MRSA awareness
- Assessed a concern with our physical fitness program
- Dispatching back-up systems
- BC Tennant continues to represent the fire service on the West Michigan Traffic Safety Advisory Committee
- BC Tennant is also part of the City of Grand Rapids Accident Review Team

2015 Safety Committee Statistics

Committee Meetings	9
Accidents Reviewed	17
Injuries Reviewed	44
Official Recommendations	0
Reported Injuries	43
Reported Accidents	19

2015 Safety Committee Team Members

Appointed by Local 366		
FF Adamczyk	Capt. Carmel	FF Lysiak
Appointed by Management		
BC Tennant*	Capt. Hendges	Capt. Fankhauser
Mutual Appointment		
DC Felix	* Denotes Committee Chair	



HAZARDOUS MATERIALS /RRT 61

Regional Response Team 61 is trained and equipped to serve the Western Michigan (Region 6) communities in the event or threat of a chemical, biological, radiological, nuclear, or explosive emergency. The Grand Rapids Fire Department Hazmat Team is based at Franklin Station, and responds to chemical emergencies in the City of Grand Rapids. All members permanently assigned to that station are trained to the Hazmat Technician level of certification. Those personnel participate with RRT 61 members

in weekly Friday training sessions to maintain their certification.

2015 Activities:

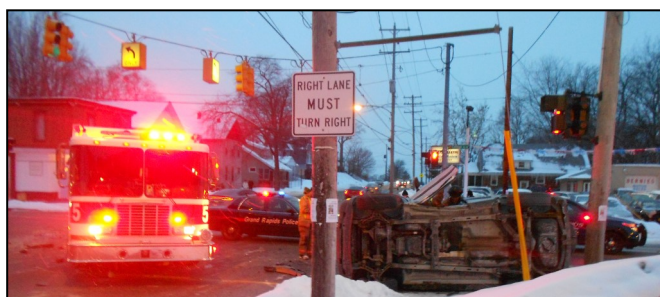
Our Leadership Team is organized to spread the workload, improve effectiveness and efficiency, and to build for a smooth succession of leadership for the future:

- Program Manager – Lt Paul Mason
- Equipment Manager – FF Mike Witteveen
- Franklin Station Captain – Capt. Kevin Carmel
- Hazmat Planner – Lt. Jason Kelley
- Training Liaison – A/Lt Justin Steeby

2015 Training:

We received (for no charge) the IFSTA Hazardous Materials Technician curriculum, which includes lesson plans, presentations, hands on activities and workshop programs, and testing and evaluation materials. Also included is access to online bulletin boards, discussion boards and resources to conduct some training online. Many agencies are now utilizing this program nationwide. We utilized the curriculum as the basis for the 64 hour Technician program conducted this fall, and will be using it to support our continuing education.

We continue to schedule, plan and develop weekly training activities to keep all members sharp in their knowledge, skills and abilities. We also utilize the opportunity to maintain compliance with current certification standards. We are utilizing the IFSTA curriculum to assist us with meeting the competencies as set forth by NFPA 472. The Program Manager and other personnel are developing a curriculum that will meet all of these needs.



2015 Equipment:

Our primary goal is to recover equipment used at incidents from the responsible party. We have been successful in this endeavor, keeping costs for the citizens of the community to a minimum. We have implemented a scheduled replacement program to ensure that we have consistent annual expenditures for equipment and supplies that have shelf lives.

2015 Administrative:

We continue to attend Region 6 meetings, ensuring that the GRFD has a voice in our role in the Region. We will also be attending other group meetings as appropriate, such as the Kent County Local Planning Team meetings. We have been and will continue to seek out grant funding opportunities for equipment and training activities.

NORTH BATTALION - BATTALION FIRE CHIEF TODD VANDERWALL



ACCREDITATION:

I was involved in verifying and validating the Standards of Coverage document for the accreditation process. This entailed reviewing the document as it was drafted, providing guidance for the risk assessment survey, building the emergency response force composition, and analyzing resource allocation for the staffing matrix.

CONTINUOUS IMPROVEMENT IMPLEMENTATION:

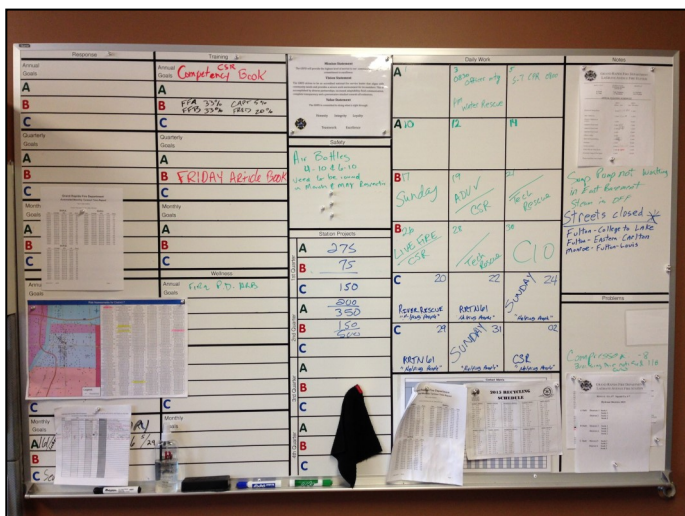
In 2015 I met with suppression personnel to enhance overall department communication and boost problem solving skills. This process was very evident with the implementation and subsequent redesign of the department's Managing for Daily Improvement (MDI) boards located in each station.

Managing for Daily Improvement comes from Lean thinking, which promotes a continuous improvement mindset in all facets of an organization. The idea of the MDI boards was to provide a way to communicate departmental goals and objectives for all members in a clear and visual manner.

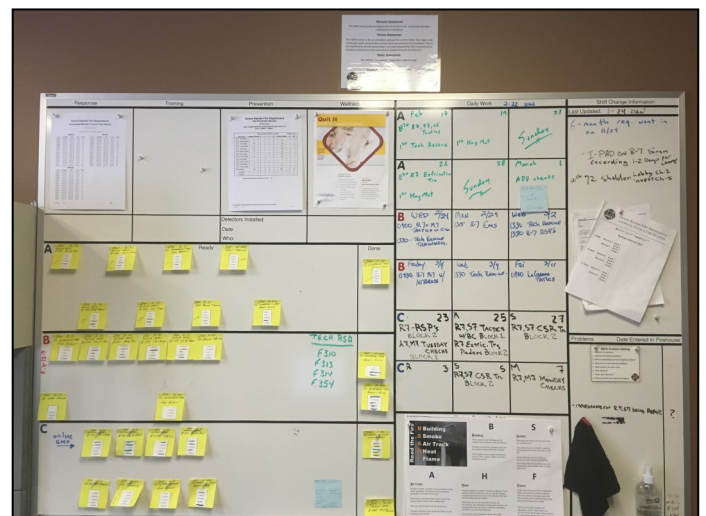
The MDI boards were first rolled out to LaGrave and Covell stations in late 2014/early 2015. At the station level this meant displaying goals and outcomes for response, training, prevention and wellness. Communication regarding the strategic and operational plans, station projects, and daily work schedules was also included. Feedback was gathered from the two station captains and all stations received the boards by April of 2015.

As part of the PDCA cycle (plan, do, check, act) it was determined the boards were not being utilized as they were intended. The boards were perceived as creating more work instead of helping personnel complete work. In September of 2015, a Kaizen (brainstorming) session was held with the north end A shift officers. A series of kata (coaching) events were then held at Bridge station to improve the work flow on the boards. After finding a system that worked better, the changes were rolled out to all stations. Preliminary feedback from the new system indicates improved benefits from the boards.

LaGrave Station MDI Before:



LaGrave Station MDI After:





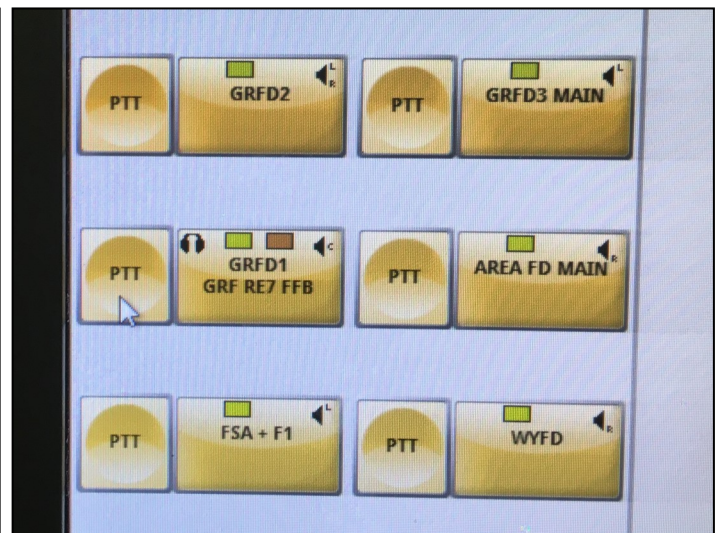
SOUTH BATTALION – BATTALION FIRE CHIEF NANCY BOSS

EMERGENCY COMMUNICATIONS



In 2015, \$70,000 in Assistance to Firefighter Grant money was spent to improve our communication network. 25 sets of UHF and VHF Kenwood TK5720 P25 compatible mobile radios were purchased and installed in our front line and reserve apparatus. This project involved removing, shifting and re-installing the older Vertex radios into support apparatus such as the transport and inspector vehicles. The Chief's cars already had Motorola APX 6500 mobile radios. When the project was completed the Grand Rapids Fire Department went from 6 different models of mobile radios to 3. Now all front line mobile and portable radios support Motorola Data Coding (MDC) and are P25 compatible. Walker, Kentwood and Plainfield Township also use P25 compatible radios. P25 is a federal mandate with the goal of enabling public safety responders to communicate with each other and, thus, achieve enhanced coordination, timely response, and efficient and effective use of communications equipment. MDC gives all users of the system awareness of who is transmitting a signal even if that person can't speak. MDC will also allow Dispatch and Incident Command officers the ability to send packets of text information to mobile and portable radios. The coding on the mobile and portable radios gives Dispatch and Command a visual of who's communicating along with the audible message. This coding capability has improved the overall communication system, enhancing safety for our first responders.

Grand Rapids Emergency Communications Center Radio Monitor Screens



SOUTH BATTALION - BATTALION FIRE CHIEF BRUCE VELDKAMP



Chief Veldkamp is involved in the areas of Wellness, Extrication, and Tech Rescue, along with the regular duties of the South Battalion Chiefs.

EXTRICATION

To allow for a greater focus on the Wellness Pillar, Chief Veldkamp has delegated maintenance of the extrication program to

Captain David Noorman. While Chief Veldkamp continues to have oversight of the program as a whole, Captain Noorman has done an excellent job with the day-to-day direction of extrication operations.



June 5, 2015

GRAND VALLEY
STATE UNIVERSITY



WEEKLY WELLNESS

WEEKLY MOTIVATION

"Motivation is what gets you started. Habit is what keeps you going."

- Jim Ryan -

Exercising within Your Target Heart Rate Zone

Heart rate is one of the most important indicators of overall wellness. A heart rate monitor can give you an accurate way to gauge your effort on a daily basis. This can help ensure you're exercising hard enough to keep your heart healthy, but not so hard you are putting yourself in danger. According to the American College of Sports Medicine it is recommended to stay within your Target Heart Rate Zone, which is 65-80%

of your Maximal Heart Rate, for at least 20 minutes per exercise period, to get the most benefit from the exercise. In order to establish your Target Heart Rate Zone you must find your Maximal Heart Rate which can be estimated by taking 220 minus age (years). Then multiply your Maximal Heart Rate by 0.65; this is the bottom end of your Target Heart Rate Zone. To find the top end of your Target Heart Rate multiply your Maximal Heart Rate by 0.80.

Benefits of Using Target Heart Rate

- **Enhanced stamina**
Working within the Target Heart Rate Zone Maximizes your ability to perform job specific tasks by decreasing fatigue and increasing stamina.
- **Increase in fat calories burned**
In combination with a healthy diet, working within your target heart rate zone can maximize the number of calories from fat burned and overall reduction of fat.
- **Boosted immune system**
Activates immune system which may leave you less susceptible to minor viruses.
- **Maintain healthy arteries**
Increases your high density lipoprotein (HDL) "good" cholesterol and decreases your low density lipoprotein (LDL) "bad" cholesterol, which may decrease the likelihood of plaque build-up in your arteries that could ultimately lead to a heart attack or stroke.
- **Stronger heart**
A stronger heart does not need to work as hard and pumps blood more efficiently throughout the body.
- **Reduced health risks**
Reduces the risk for conditions such as, heart disease, obesity, metabolic syndrome, stroke, hypertension, type 2 diabetes, etc.
- **Management of chronic conditions**
May help manage chronic conditions such as hypertension by lowering blood pressure and type 2 diabetes by controlling blood glucose levels.

About Us



Devin Senchuk

"I grew up in Traverse City, MI. I am finishing up with a Bachelor's degree in Exercise Science. With this degree I plan on pursuing a career in strength and conditioning with athletes. Hockey is a huge passion of mine. I played for 15 years. In my spare time I enjoy being outdoors and going to the gym. I plan on moving to Denver, Colorado this summer for a change in scenery and to be with my family. I look forward to meeting everyone soon and am excited to start working with all of you!"

dsenchuk@grand-rapids.mi.us



Zach Raetz

"I am from Jackson, MI where I went to Lumen Christi and graduated in 2011. I spent my first two years of college at the University of Toledo. I then transferred to Grand Valley majoring in Clinical Exercise Science with hopes of going to physical therapy school upon graduation next spring. I love to lift weights and doing anything outside, including but not limited to hiking, kayaking, camping, and snowboarding. I cannot wait to meet and get start working with everyone!"

zraetz@grand-rapids.mi.us

American College of Sports Medicine (2013). Guidelines for Exercise Testing and Prescription (13th ed.). Philadelphia, PA: Lippincott Williams and Wilkins.

WELLNESS

Battalion Chiefs Bruce Veldkamp and Bart Perry have been working together to care for the wellness needs of the Grand Rapids Fire Department. Both Chiefs believe that wellness is a vital component to effective response.

The Wellness Pillar is designed to address items linked to the physical, mental, emotional and even financial needs of the GRFD members. To accomplish this, components such as the Critical Incident Stress Management program (CISM), physical fitness equipment and education, nutritional awareness information and the use of mental health facilities have been established and continued in 2015. For example, in 2015 we were fortunate to again have two interns from Grand Valley State University assist in educating the membership on ways to get in, and stay in, shape. Other 2015 accomplishments in the scope of Wellness include an extension of a seminar to educate on the effects of cumulative stress on emergency responders and their families and further education on the importance of hydration.

Many thanks go out to members of the community who have provided assistance in the areas of Wellness and Extrication.



SOUTH BATTALION - BATTALION FIRE CHIEF DAN STODDARD

DISPATCH LIAISON

This year I trained 5 new emergency communications operators (ECO's) to the fire dispatch board. This included spending many hours in the dispatch center, as well as administering the ride-a-long training program so that ECO's can understand our dynamic deployment model. This training includes familiarization with various styles of apparatus, the number of personnel on them, and both their static location at the station and in-district location when they are "on the air" performing residential safety assessments, training, or other services. Follow up inquiries are conducted on critical calls, ensuring both dispatch and GRFD protocols are followed; ensuring a consistent level of dispatching outcomes.

AIRPORT LIAISON

This year saw the GRFD working with the Gerald R. Ford International Airport to maintain the operational and automatic mutual aid agreements in place with Cascade, Kentwood, Grand Rapids and the GRFIA.



AWARDS COMMITTEE

Matthew Keusch	John Keillor	Cory Kernodle	Jeffrey Lysiak
Joel MacDonald	David Noorman	William Smith	Jeff VanderWall

This year's awards ceremony provided another opportunity for our membership and representatives from the community to reflect on and celebrate individual and group achievements within the department. Thanks are due to all of the members of the awards committee.

Ed DeMaagd was recognized as the 2015 Fire Fighter of the Year. Congratulations to all of the other recipients of service awards and commendations that were presented last October!

STAFFING

Given the extraordinary amount of call backs last year, much of my time was involved with staffing. The call back spreadsheet is my area of oversight and I worked on it daily to:

- Ensure it was accurate
- Monitor it for rank equalization
- Communicate with the union and administration regarding those who should be considered "next up" for various reasons
- Correct mistakes
- Monitor and move personnel on the spreadsheet to reflect their moves between the ranks, shifts, and 40hrs
- Answer questions regarding the call back procedure and specific callbacks
- Maintain the spreadsheet as it gets corrupted due to multiple users

Please Join Us

Grand Rapids
Fire Department
2015 Awards Ceremony



October 14, 2015, 7:00 P.M.
GVSU—Richard M. DeVos Center
Loosemore Auditorium

401 W. Fulton

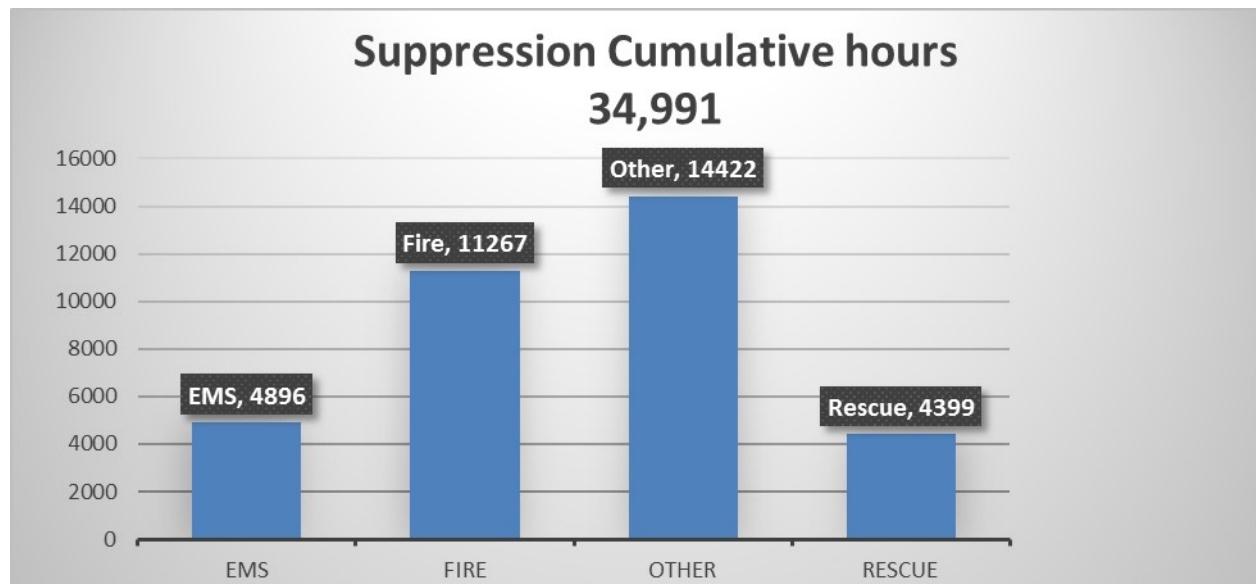
Free Parking in GVSU lot at Fulton & Mt. Vernon (under 131)



FIRE CHIEF-TRAINING LEE FINLAYSON

GRFD TRAINING

Another year has passed with changes to the Training Division personnel. With Captain Race returning to Fire Suppression, Wes Kelley was promoted to Fire Captain-Training . A/Lt Lyle Fredrickson and A/Lt Justin Steeby rotated into Training to help with the recruit academy. In November we had another transfer of two new Training Officers, Lt Steve Lohman and Lt Justin Holmes. Led by this roster of capable personnel, the GRFD trained for nearly 35,000 hours in 2015.



January	February	March	April
Orientation	Mayday	Rapid Intervention	Technical Rescue
May	June	July	August
Hose Advances	Forcible Entry	Water Supply	Ventilation
September	October	November	December
Ladders	Building Construction	Fire Behavior	SCBA Drills

2015 was busy for the Training Division. The training staff attended 16 outside trainings for their professional development. We held numerous training sessions, and we used resources ranging from the National Fire Academy, for two weekend Officer Development classes, to Texas A&M Engineering Extension Service, who provided funding and instructors for ICS-347/300 and ICS-400 classes.

GRFD training staff attained Fire Officer I/II/III certifications, including all of the prerequisites. That allowed 28 of our brothers and sisters to acquire the same level of training. We administered two Fire Instructor I classes, allowing 23 of our members to become NFPA Fire Instructor I certified with a 100% success rate. The Training Division delivered a Hazmat Technician course for the personnel at Franklin Station. Two Ropes and CSR classes were conducted for the new members of the Rescue companies.

SPECIAL OPERATIONS:

Here are a few of the memorable technical rescue events that happened in 2015:

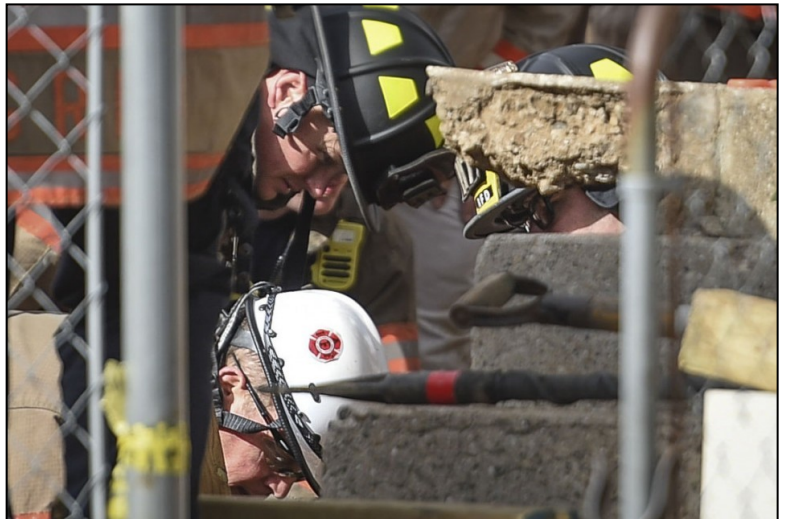
RIVER RESCUE

On July 20th multiple companies responded to a request for assistance with a river rescue in the Wyoming area. Coordination among multiple agencies resulted in the rescue of a woman threatening to jump from a pedestrian bridge over the Grand River. Crews stood by for several hours until the woman eventually jumped into the river. Swimmers from Boat 1 and 2 were able to quickly make contact with the woman and bring her safely to shore.



TRENCH/COLLAPSE RESCUE

A trench rescue at 21 Grove St NE, involving two men who were attempting to repair a sewer line, proved to be very technically challenging for responding units, which included personnel from the Walker Fire Department. All team members performed well, and while one victim succumbed to his injuries, the other was successfully rescued after being extricated from debris that had buried him up to his chest.



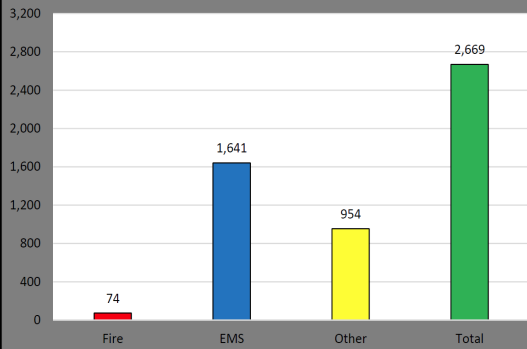
MACHINE EXTRICATION

On October 27th an industrial accident occurred at Steel Supply and Engineering, 1222 Burton St. SE. The incident involved a rack of steel beams that fell on a worker, pinning his arm and waist. GRFD personnel successfully isolated the hazards and then removed the pile of debris from around the worker. He was extricated successfully and is recovering from his injuries.

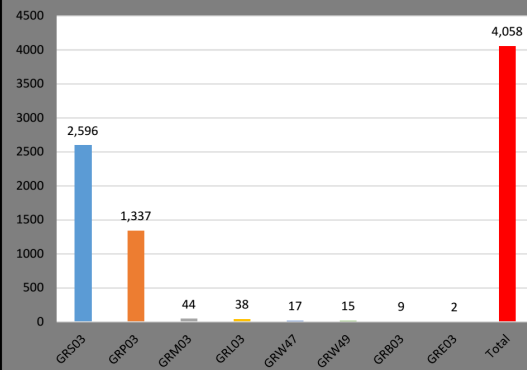


Continued weekly training was the foundation of these successful technical incidents.

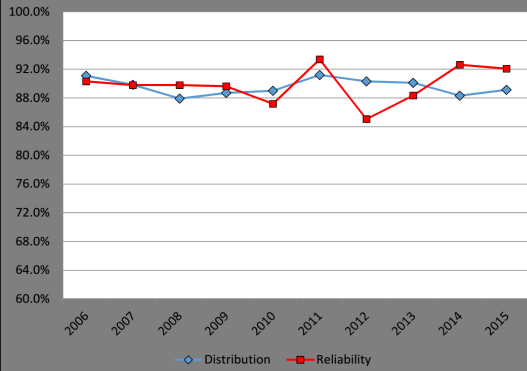
Bridge St. Station 2015 Incidents in District



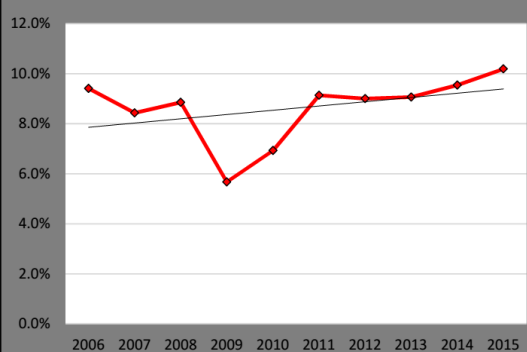
Bridge St. Station 2015 Apparatus Responses



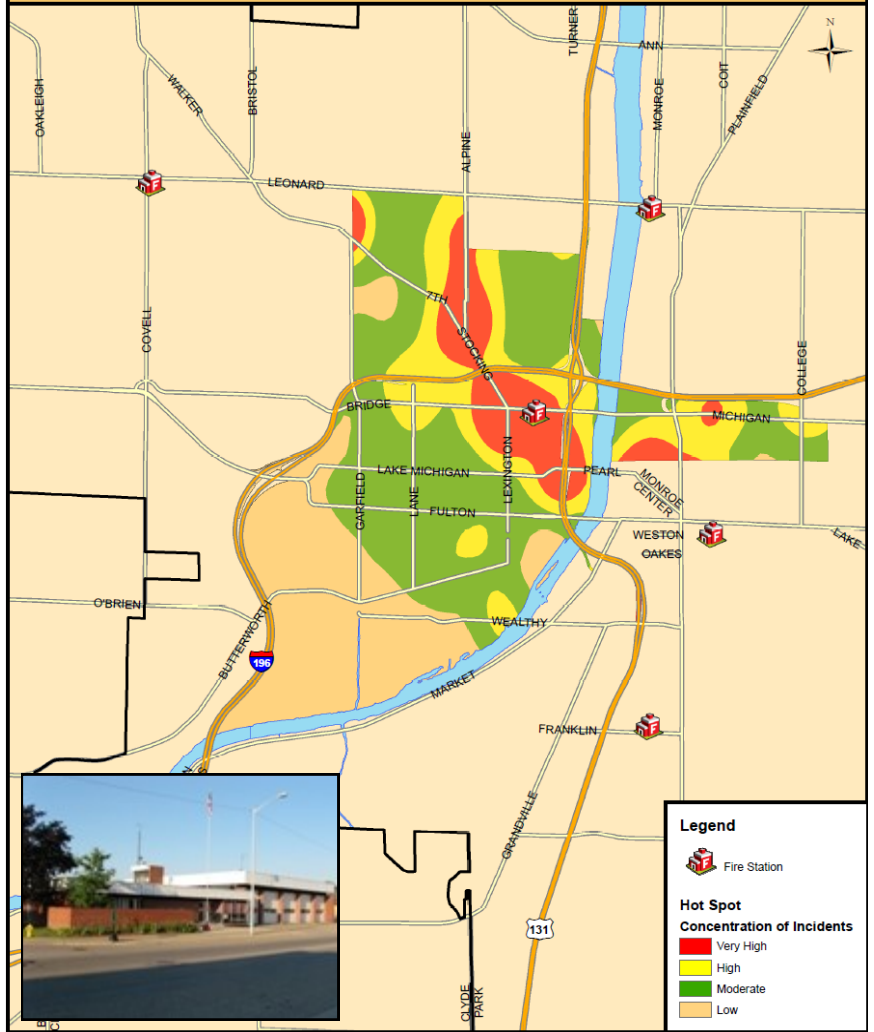
Bridge St. Station Distribution & Reliability Compliance



Bridge St. Station Simultaneous Calls



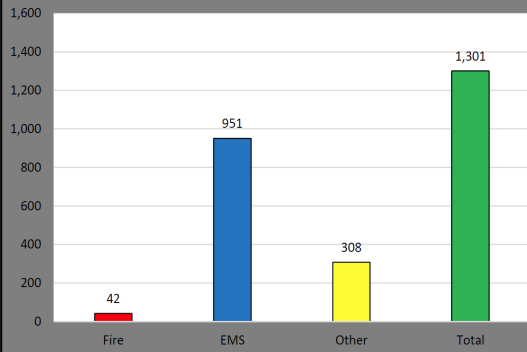
Hot Spot Map of Bridge Street Fire Station's 2015 Incidents



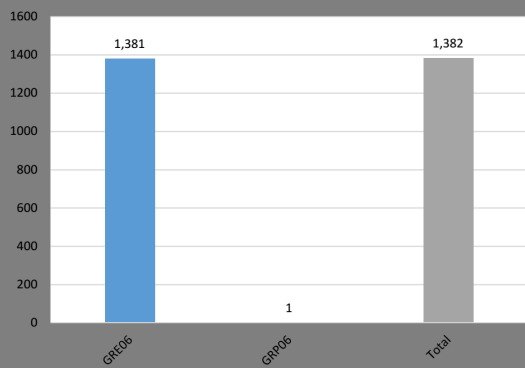
Temporal Analysis - 2015 EMS Bridge								
Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
00:00-00:59	12	7	6	6	5	8	11	55
01:00-01:59	13	5	5	1	2	5	8	39
02:00-02:59	8	2	7	6	7	3	5	38
03:00-03:59	10	8	1	3	0	9	6	37
04:00-04:59	3	2	5	4	1	2	3	20
05:00-05:59	5	4	3	0	3	2	2	19
06:00-06:59	8	5	6	3	2	3	5	32
07:00-07:59	7	10	9	4	4	7	6	47
08:00-08:59	4	13	10	10	3	7	7	54
09:00-09:59	8	13	13	13	9	8	12	76
10:00-10:59	13	13	9	14	11	10	14	84
11:00-11:59	14	16	18	10	11	18	11	98
12:00-12:59	12	19	15	16	11	15	14	102
13:00-13:59	14	8	9	14	13	10	12	80
14:00-14:59	12	11	13	16	15	16	13	96
15:00-15:59	15	22	14	14	11	11	7	94
16:00-16:59	15	8	10	17	17	17	11	95
17:00-17:59	14	17	12	8	10	13	16	90
18:00-18:59	11	17	13	17	17	14	12	101
19:00-19:59	7	15	14	16	9	8	15	84
20:00-20:59	13	10	20	14	10	10	17	94
21:00-21:59	10	14	8	6	10	14	8	70
22:00-22:59	11	13	9	12	7	12	9	73
23:00-23:59	6	8	9	10	12	11	7	63
Total	245	260	238	234	200	233	231	1,641

Temporal Analysis - 2015 Fire Bridge								
Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
00:00-00:59	0	0	0	0	0	0	0	0
01:00-01:59	3	0	0	0	0	1	0	4
02:00-02:59	1	1	0	0	1	0	0	3
03:00-03:59	0	0	0	0	1	1	0	2
04:00-04:59	2	0	0	0	1	0	0	3
05:00-05:59	0	0	0	0	0	0	0	0
06:00-06:59	0	0	0	0	0	1	1	2
07:00-07:59	0	0	1	0	0	0	0	1
08:00-08:59	0	0	1	0	0	1	0	2
09:00-09:59	1	0	1	0	0	0	0	2
10:00-10:59	0	0	1	0	0	0	0	1
11:00-11:59	0	0	0	0	0	0	0	0
12:00-12:59	0	0	1	0	1	0	0	2
13:00-13:59	1	1	1	0	2	2	1	8
14:00-14:59	0	2	0	0	2	1	0	5
15:00-15:59	1	0	1	1	0	0	0	3
16:00-16:59	0	0	0	0	0	0	1	1
17:00-17:59	1	0	1	1	0	1	0	4
18:00-18:59	1	0	0	0	1	2	0	4
19:00-19:59	0	1	0	0	2	2	2	7
20:00-20:59	0	1	0	1	0	2	2	6
21:00-21:59	0	1	2	1	0	4	0	8
22:00-22:59	0	1	1	0	0	0	1	3
23:00-23:59	0	0	0	0	0	1	2	3
Total	11	8	11	4	11	19	10	74

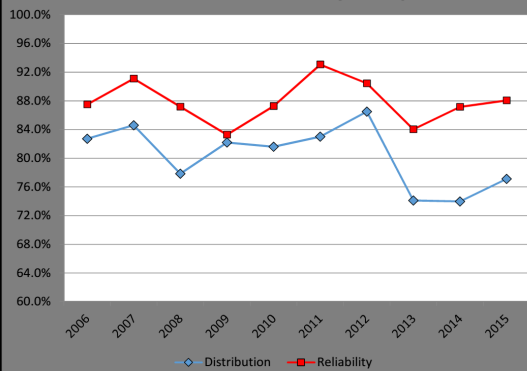
Burton St. Station 2015 Incidents in District



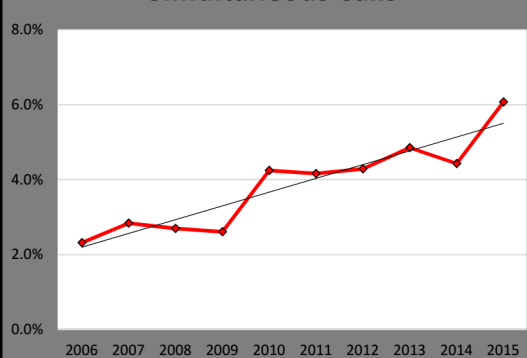
Burton St. Station 2015 Apparatus Responses



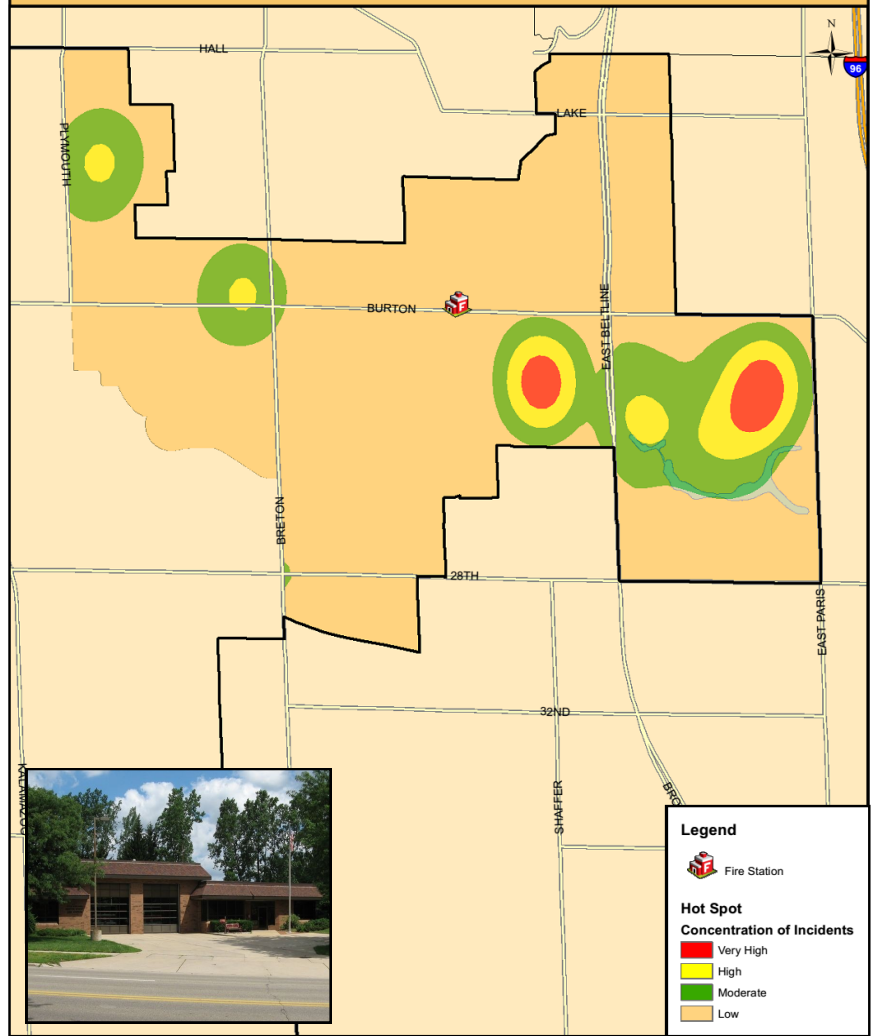
Burton St. Station Distribution & Reliability Compliance



Burton St. Station Simultaneous Calls



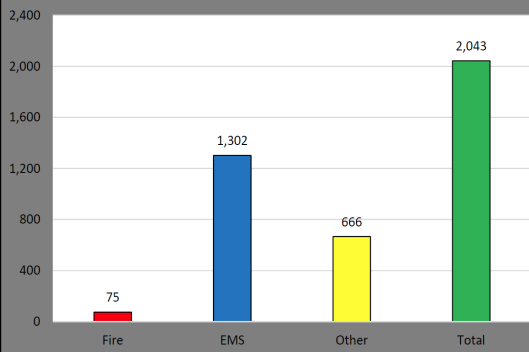
Hot Spot Map of Burton Street Fire Station's 2015 Incidents



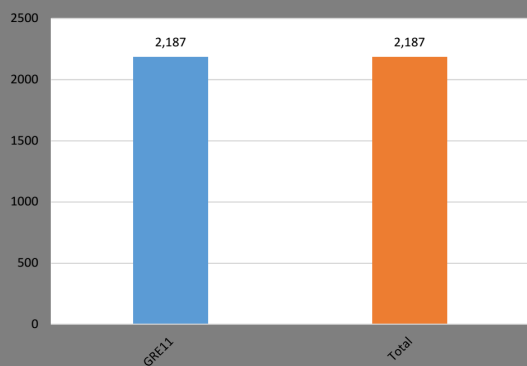
Temporal Analysis - 2015 EMS Burton								
Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
00:00-00:59	1	2	2	2	2	2	7	18
01:00-01:59	6	1	4	4	3	4	6	28
02:00-02:59	3	2	3	2	1	2	3	16
03:00-03:59	3	2	4	3	7	2	3	24
04:00-04:59	1	4	2	2	4	1	3	17
05:00-05:59	5	2	1	2	4	3	2	19
06:00-06:59	1	3	6	3	0	4	0	17
07:00-07:59	5	4	6	7	7	5	3	37
08:00-08:59	6	3	7	7	6	6	9	44
09:00-09:59	7	13	16	1	10	4	5	56
10:00-10:59	7	13	12	11	11	5	4	63
11:00-11:59	6	12	8	8	7	11	10	62
12:00-12:59	8	6	11	8	8	5	7	53
13:00-13:59	5	6	6	5	8	8	6	44
14:00-14:59	8	8	9	10	4	13	10	62
15:00-15:59	11	11	7	8	5	7	7	56
16:00-16:59	5	10	5	11	5	6	5	47
17:00-17:59	6	4	4	4	4	12	3	37
18:00-18:59	9	12	6	3	3	7	3	43
19:00-19:59	1	5	10	9	8	3	6	42
20:00-20:59	3	2	7	6	8	10	7	43
21:00-21:59	7	6	11	7	11	8	5	55
22:00-22:59	7	5	3	10	2	2	5	34
23:00-23:59	5	5	2	7	0	7	8	34
Total	126	141	152	140	128	137	127	951

Temporal Analysis - 2015 Fire Burton								
Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
00:00-00:59	1	0	0	0	0	0	1	2
01:00-01:59	0	0	0	0	0	0	1	1
02:00-02:59	0	0	1	0	0	0	0	1
03:00-03:59	0	0	0	0	0	1	0	1
04:00-04:59	0	0	1	0	0	0	0	1
05:00-05:59	0	0	0	0	0	0	0	0
06:00-06:59	0	0	0	0	0	0	0	0
07:00-07:59	1	0	0	0	0	0	0	1
08:00-08:59	0	0	0	0	0	0	0	0
09:00-09:59	0	0	0	0	0	0	0	0
10:00-10:59	0	0	0	0	0	0	1	1
11:00-11:59	0	0	0	1	1	0	0	2
12:00-12:59	2	0	1	1	1	1	0	6
13:00-13:59	0	0	0	0	0	1	0	1
14:00-14:59	2	0	0	0	0	0	0	2
15:00-15:59	1	1	0	0	0	0	0	2
16:00-16:59	0	0	0	1	0	1	1	3
17:00-17:59	1	0	0	0	0	2	0	3
18:00-18:59	0	0	0	1	0	0	1	2
19:00-19:59	0	0	0	0	0	0	1	1
20:00-20:59	0	2	1	1	0	0	0	4
21:00-21:59	2	0	0	0	0	3	1	6
22:00-22:59	0	0	1	0	0	0	0	1
23:00-23:59	0	1	0	0	0	0	0	1
Total	10	4	5	5	2	9	7	42

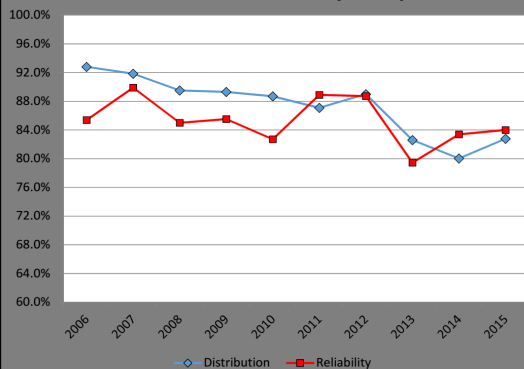
**Chester St. Station
2015 Incidents in District**



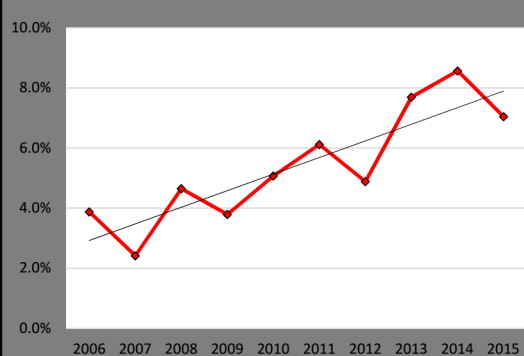
**Chester St. Station
2015 Apparatus Responses**



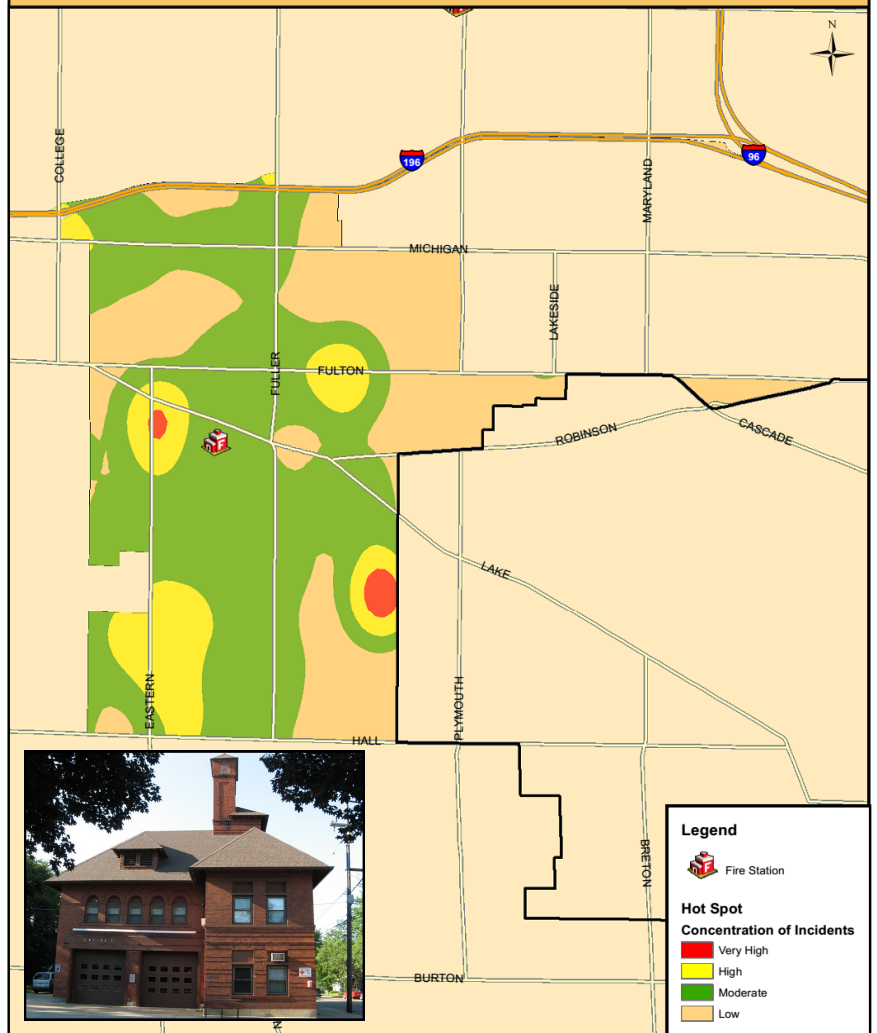
**Chester St. Station
Distribution & Reliability Compliance**



**Chester St. Station
Simultaneous Calls**



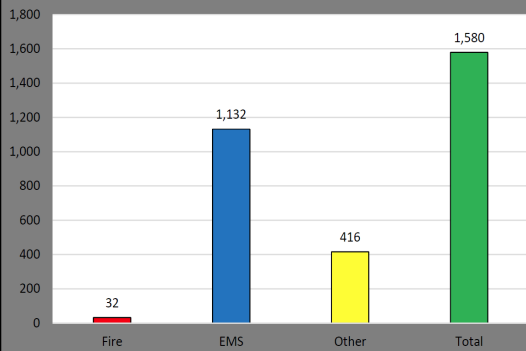
Hot Spot Map of Chester Street Fire Station's 2015 Incidents



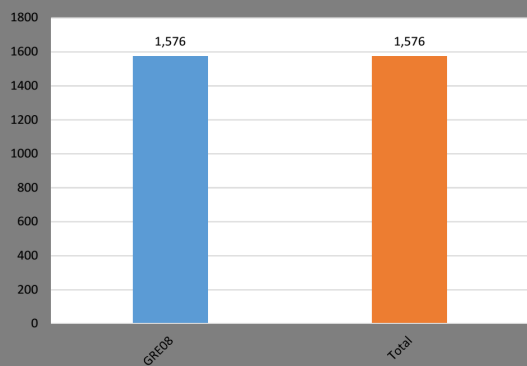
Temporal Analysis - 2015 EMS Chester								
Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
00:00-00:59	5	4	3	6	7	6	6	37
01:00-01:59	9	10	7	6	3	6	7	48
02:00-02:59	7	2	3	3	1	4	8	28
03:00-03:59	8	4	3	3	5	1	6	30
04:00-04:59	4	5	0	7	2	1	7	26
05:00-05:59	3	2	5	3	4	3	3	23
06:00-06:59	4	3	6	3	7	9	7	39
07:00-07:59	5	12	4	10	6	6	7	50
08:00-08:59	11	8	7	9	9	7	7	58
09:00-09:59	5	6	6	11	14	8	6	56
10:00-10:59	8	9	14	10	15	12	8	76
11:00-11:59	8	15	4	10	11	10	8	66
12:00-12:59	5	10	9	10	9	15	7	65
13:00-13:59	8	13	12	8	13	12	15	81
14:00-14:59	14	8	10	9	6	12	10	69
15:00-15:59	6	8	9	11	11	11	11	67
16:00-16:59	8	11	16	15	6	16	10	82
17:00-17:59	9	8	11	12	19	13	8	80
18:00-18:59	10	7	11	5	10	12	6	61
19:00-19:59	3	11	6	6	6	9	7	48
20:00-20:59	11	6	10	8	10	10	4	59
21:00-21:59	6	10	3	7	10	10	7	53
22:00-22:59	6	9	11	11	6	7	11	61
23:00-23:59	4	6	7	5	8	3	6	39
Total	167	187	177	188	198	203	182	1,302

Temporal Analysis - 2015 Fire Chester								
Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
00:00-00:59	0	1	0	0	0	0	1	2
01:00-01:59	0	1	1	1	1	0	0	4
02:00-02:59	1	0	0	0	0	2	0	3
03:00-03:59	0	0	1	0	1	0	0	2
04:00-04:59	0	0	1	0	1	0	0	2
05:00-05:59	0	0	0	0	0	0	0	0
06:00-06:59	0	0	0	1	0	0	0	1
07:00-07:59	0	0	0	0	1	0	0	1
08:00-08:59	0	0	0	0	0	0	0	0
09:00-09:59	0	0	1	1	0	0	0	2
10:00-10:59	1	0	0	0	1	0	0	2
11:00-11:59	0	0	3	0	1	2	0	6
12:00-12:59	0	0	1	0	0	0	0	1
13:00-13:59	2	0	0	0	0	0	1	3
14:00-14:59	1	1	0	1	0	0	1	4
15:00-15:59	0	1	2	0	1	0	2	6
16:00-16:59	1	1	1	0	0	0	2	5
17:00-17:59	1	0	0	1	1	1	2	6
18:00-18:59	0	2	0	0	0	0	0	2
19:00-19:59	0	0	0	1	0	2	1	4
20:00-20:59	0	1	1	1	0	2	0	5
21:00-21:59	2	1	1	0	0	0	2	6
22:00-22:59	1	2	0	0	1	1	0	5
23:00-23:59	0	2	0	1	0	0	0	3
Total	10	13	13	8	9	10	12	75

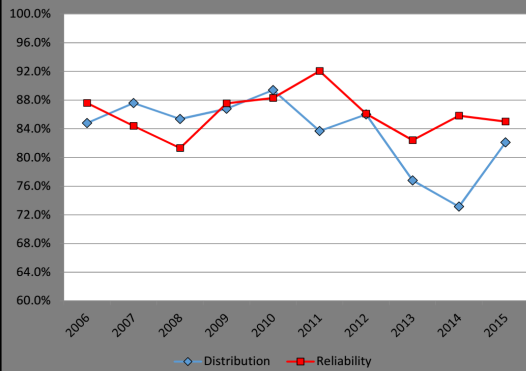
Covell Ave. Station 2015 Incidents in District



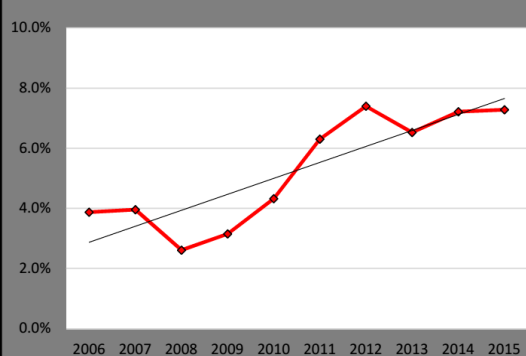
Covell Ave. Station 2015 Apparatus Responses



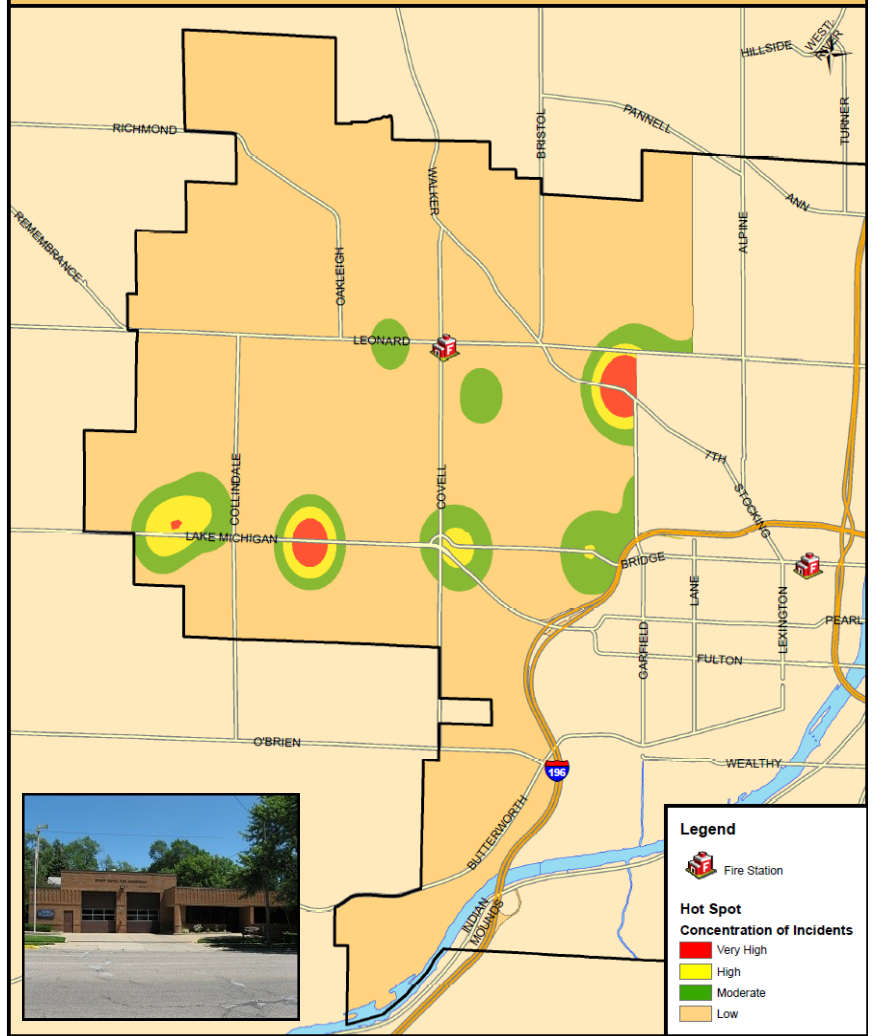
Covell Ave. Station Distribution & Reliability Compliance



Covell St. Station Simultaneous Calls



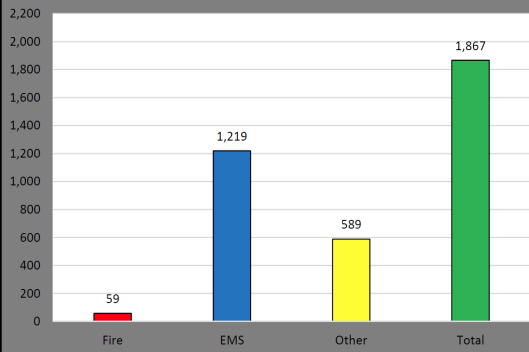
Hot Spot Map of Covell Avenue Fire Station's 2015 Incidents



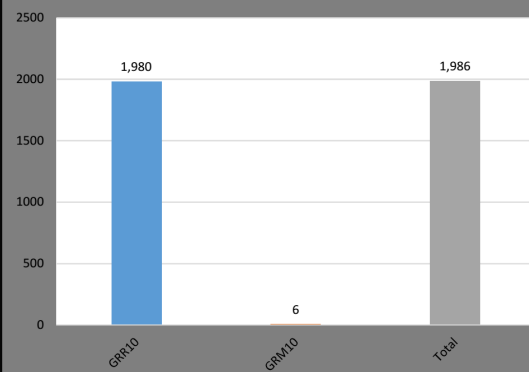
Temporal Analysis - 2015 EMS Covell								
Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
00:00-00:59	6	3	5	6	4	5	5	34
01:00-01:59	3	4	3	2	6	2	3	23
02:00-02:59	0	1	4	4	4	5	5	23
03:00-03:59	3	4	4	4	1	0	5	21
04:00-04:59	2	5	6	3	4	4	1	25
05:00-05:59	4	2	5	3	4	1	2	21
06:00-06:59	4	4	0	3	6	4	6	27
07:00-07:59	5	3	11	8	4	7	4	42
08:00-08:59	10	7	20	7	6	6	5	61
09:00-09:59	10	10	13	9	11	11	11	75
10:00-10:59	8	11	19	10	8	10	8	74
11:00-11:59	12	8	6	7	12	8	12	65
12:00-12:59	6	13	12	11	7	7	9	65
13:00-13:59	8	10	11	9	6	12	7	63
14:00-14:59	11	9	5	7	12	4	9	57
15:00-15:59	6	15	12	6	6	3	4	52
16:00-16:59	7	5	7	9	9	8	6	51
17:00-17:59	7	8	7	7	7	11	10	57
18:00-18:59	7	11	9	9	11	7	13	67
19:00-19:59	11	11	10	7	6	8	4	57
20:00-20:59	7	8	5	7	3	11	7	48
21:00-21:59	6	5	5	7	8	7	8	46
22:00-22:59	3	9	1	8	7	12	6	46
23:00-23:59	4	5	5	2	6	5	5	32
Total	150	171	185	155	158	158	155	1,132

Temporal Analysis - 2015 Fire Covell								
Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
00:00-00:59	0	0	0	0	0	0	0	0
01:00-01:59	1	0	0	0	1	0	0	2
02:00-02:59	0	0	0	0	0	1	0	1
03:00-03:59	0	1	0	0	0	0	0	1
04:00-04:59	0	0	0	0	0	0	0	0
05:00-05:59	0	0	0	0	0	0	0	0
06:00-06:59	0	0	0	0	0	1	0	1
07:00-07:59	0	0	0	0	0	0	1	1
08:00-08:59	0	0	0	0	0	0	0	0
09:00-09:59	1	0	0	1	0	0	0	2
10:00-10:59	1	0	0	0	1	1	0	3
11:00-11:59	0	1	0	0	1	0	0	2
12:00-12:59	1	0	0	0	0	0	0	1
13:00-13:59	0	0	0	0	1	0	0	1
14:00-14:59	0	0	0	0	0	0	0	0
15:00-15:59	1	0	0	0	0	1	1	3
16:00-16:59	0	0	0	1	0	0	0	1
17:00-17:59	3	0	1	0	1	0	0	5
18:00-18:59	1	2	0	0	0	0	1	4
19:00-19:59	0	0	0	0	0	0	0	0
20:00-20:59	0	0	0	0	0	0	1	1
21:00-21:59	0	0	1	0	0	0	0	1
22:00-22:59	0	0	0	0	0	1	0	1
23:00-23:59	1	0	0	0	0	0	0	1
Total	10	4	2	2	5	5	4	32

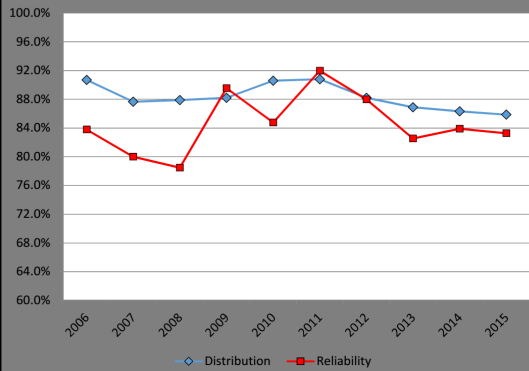
Division Ave. Station 2015 Incidents in District



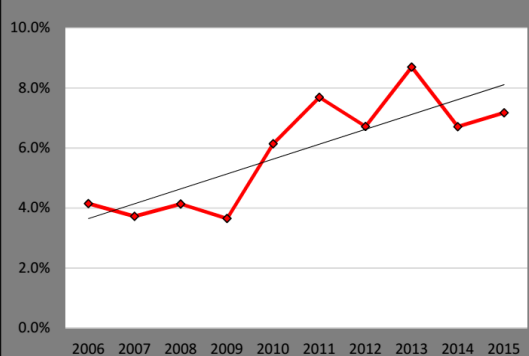
Division Ave. Station 2015 Apparatus Responses



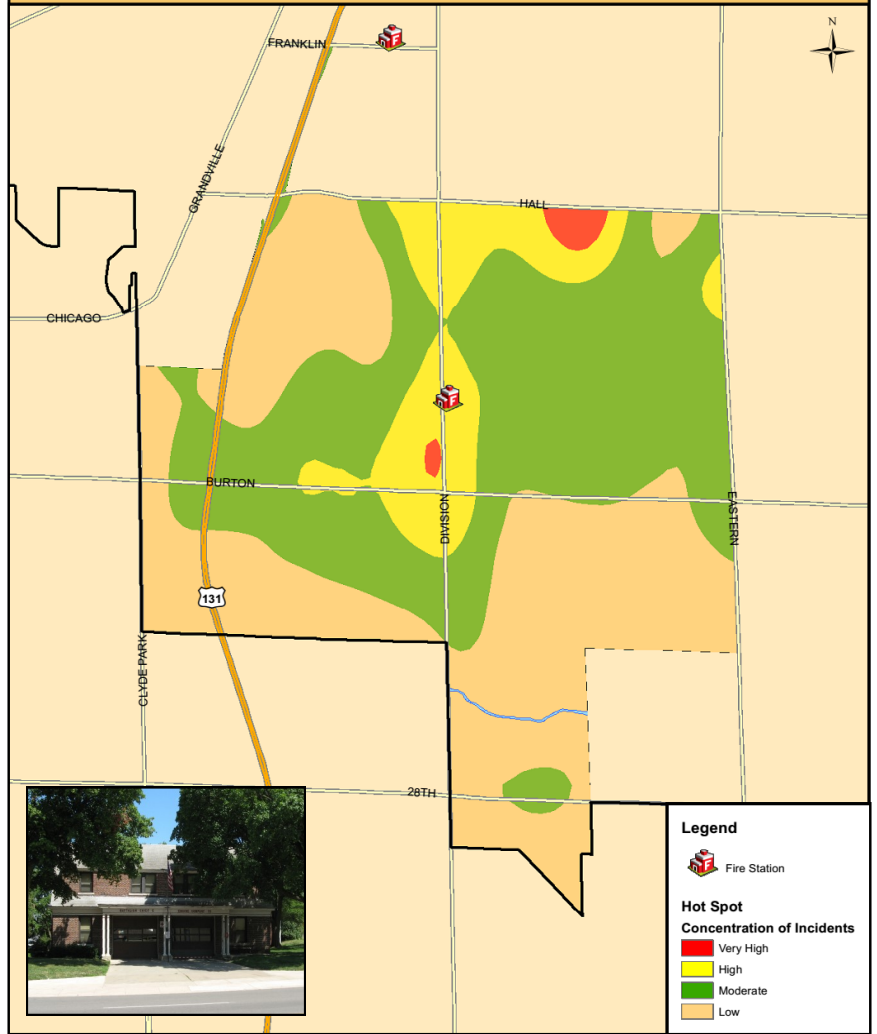
Division Ave. Station Distribution & Reliability Compliance



Division St. Station Simultaneous Calls



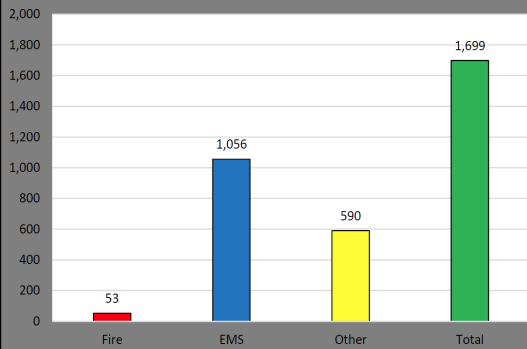
Hot Spot Map of Division Avenue Fire Station's 2015 Incidents



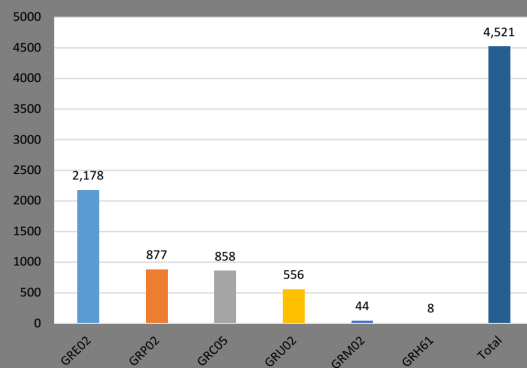
Temporal Analysis - 2015 EMS Division								
Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
00:00-00:59	6	5	4	6	2	5	13	41
01:00-01:59	6	3	7	6	5	4	2	33
02:00-02:59	8	2	7	4	4	5	10	40
03:00-03:59	7	1	9	6	3	5	4	35
04:00-04:59	2	1	4	3	4	5	5	24
05:00-05:59	5	7	2	2	4	3	4	27
06:00-06:59	4	5	3	3	3	5	10	33
07:00-07:59	4	6	11	3	9	6	0	39
08:00-08:59	8	6	7	12	6	4	11	54
09:00-09:59	2	12	5	4	6	9	5	43
10:00-10:59	8	8	5	8	8	6	8	51
11:00-11:59	3	11	7	6	11	8	7	53
12:00-12:59	7	6	7	10	9	16	9	64
13:00-13:59	9	11	8	10	9	12	7	66
14:00-14:59	5	9	4	7	10	10	9	54
15:00-15:59	13	9	14	5	9	12	7	69
16:00-16:59	12	13	7	14	10	10	13	79
17:00-17:59	9	8	14	13	9	9	10	72
18:00-18:59	6	8	10	7	6	6	7	50
19:00-19:59	10	11	13	6	9	9	6	64
20:00-20:59	9	10	7	7	6	10	7	56
21:00-21:59	11	8	10	6	8	7	6	56
22:00-22:59	4	7	11	9	14	6	9	60
23:00-23:59	13	7	4	7	7	9	9	56
Total	171	174	180	164	171	181	178	1,219

Temporal Analysis - 2015 Fire Division								
Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
00:00-00:59	2	1	0	0	0	0	0	3
01:00-01:59	0	0	0	0	1	0	2	3
02:00-02:59	0	0	0	1	0	0	0	1
03:00-03:59	0	0	0	0	0	0	0	0
04:00-04:59	0	1	0	1	0	0	0	2
05:00-05:59	1	0	0	0	0	1	0	2
06:00-06:59	1	0	0	0	0	0	0	1
07:00-07:59	0	2	0	0	0	0	0	2
08:00-08:59	0	0	1	0	0	0	0	1
09:00-09:59	1	0	0	0	0	1	0	2
10:00-10:59	0	0	0	0	0	0	0	0
11:00-11:59	0	0	0	0	0	1	0	1
12:00-12:59	1	1	0	0	1	0	0	3
13:00-13:59	0	1	0	1	1	0	0	3
14:00-14:59	0	0	0	2	0	0	1	3
15:00-15:59	1	0	0	0	0	1	0	2
16:00-16:59	0	1	0	0	0	0	0	1
17:00-17:59	1	0	1	0	2	1	0	5
18:00-18:59	0	0	1	1	0	0	1	3
19:00-19:59	0	0	0	2	3	1	0	6
20:00-20:59	1	3	0	1	1	0	1	7
21:00-21:59	1	1	1	1	0	1	1	6
22:00-22:59	0	0	1	1	0	0	0	2
23:00-23:59	0	0	0	0	0	0	0	0
Total	10	11	5	11	9	7	6	59

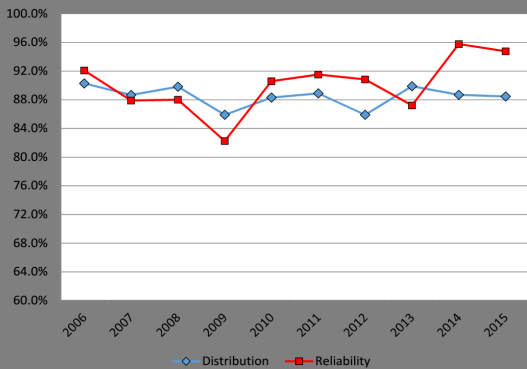
Franklin St. Station 2015 Incidents in District



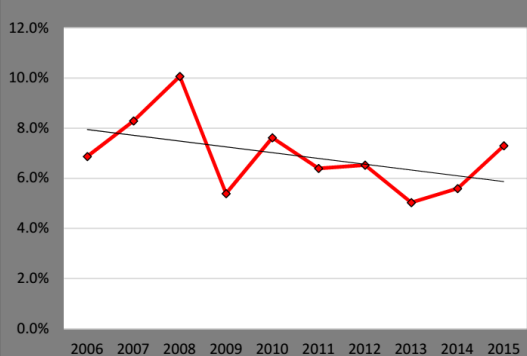
Franklin St. Station 2015 Apparatus Responses



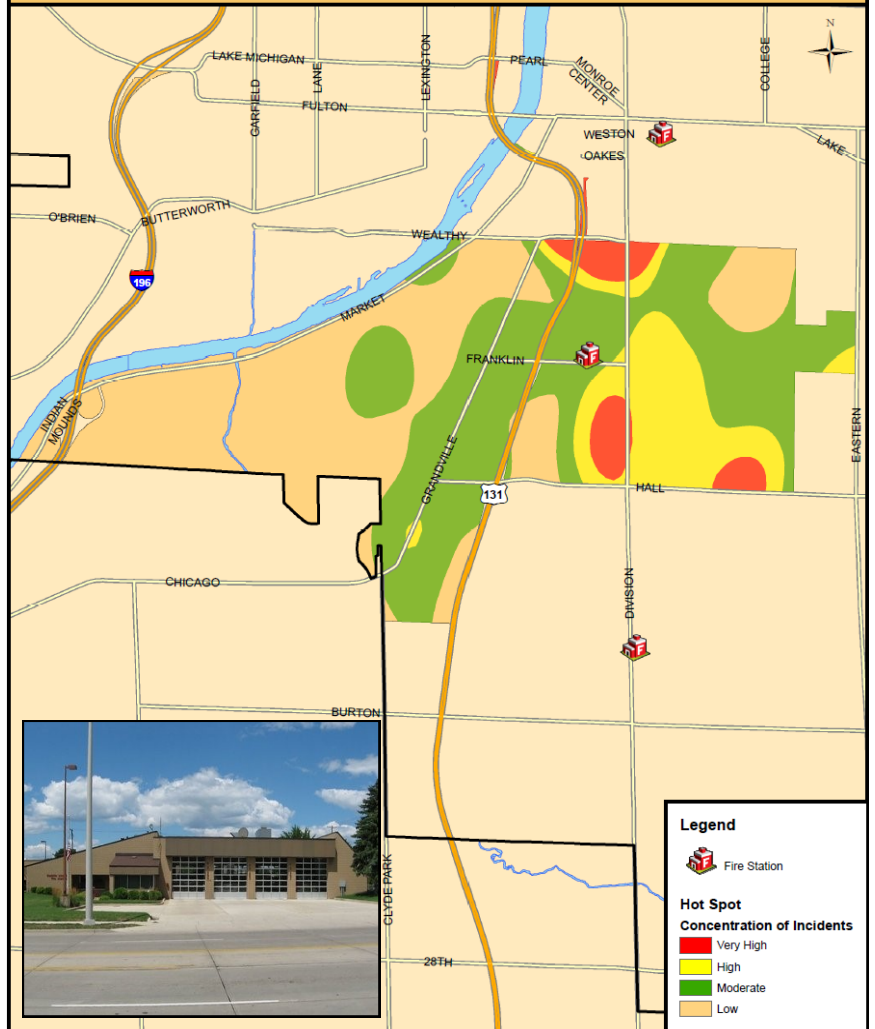
Franklin St. Station Distribution & Reliability Compliance



Franklin St. Station Simultaneous Calls



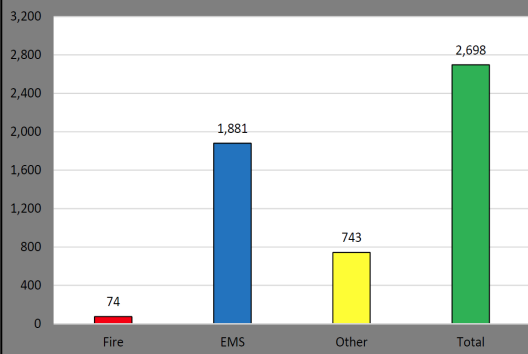
Hot Spot Map of Franklin Street Fire Station's 2015 Incidents



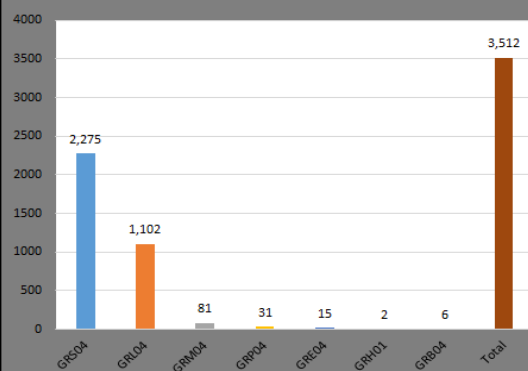
Temporal Analysis - 2015 EMS Franklin								
Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
00:00-00:59	7	4	4	4	9	5	7	40
01:00-01:59	6	7	6	4	3	3	4	33
02:00-02:59	6	4	3	2	3	5	12	35
03:00-03:59	2	4	3	4	3	5	7	28
04:00-04:59	13	2	3	2	3	4	4	31
05:00-05:59	9	1	7	4	3	4	1	29
06:00-06:59	2	2	4	0	5	1	1	15
07:00-07:59	3	3	5	5	4	3	2	25
08:00-08:59	2	7	6	4	3	9	7	38
09:00-09:59	7	7	5	7	3	6	7	42
10:00-10:59	6	5	9	5	4	10	8	47
11:00-11:59	10	7	12	7	13	7	4	60
12:00-12:59	11	7	12	9	3	10	1	53
13:00-13:59	3	9	10	10	9	8	8	57
14:00-14:59	10	8	5	11	8	9	5	56
15:00-15:59	4	11	9	9	7	7	4	51
16:00-16:59	14	8	7	12	7	11	7	66
17:00-17:59	8	5	11	5	7	9	8	53
18:00-18:59	7	10	7	8	7	9	5	53
19:00-19:59	7	5	6	8	8	5	5	44
20:00-20:59	11	9	6	9	9	7	9	60
21:00-21:59	7	8	5	7	2	12	12	53
22:00-22:59	7	6	8	5	5	8	14	53
23:00-23:59	7	5	1	6	3	5	7	34
Total	169	144	154	147	131	162	149	1,056

Temporal Analysis - 2015 Fire Franklin								
Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
00:00-00:59	0	2	0	1	0	0	0	3
01:00-01:59	0	0	0	0	0	0	0	0
02:00-02:59	0	1	0	0	0	1	0	2
03:00-03:59	0	0	0	0	0	1	1	2
04:00-04:59	0	0	0	1	0	0	0	1
05:00-05:59	0	1	0	0	0	0	0	1
06:00-06:59	0	0	1	0	0	1	0	2
07:00-07:59	0	0	1	0	0	0	0	1
08:00-08:59	0	0	0	0	0	0	0	0
09:00-09:59	0	0	0	1	0	0	0	1
10:00-10:59	0	1	0	0	0	1	0	2
11:00-11:59	0	1	0	0	0	0	0	1
12:00-12:59	0	1	2	0	2	0	0	5
13:00-13:59	3	1	0	1	0	0	0	5
14:00-14:59	0	1	0	0	0	0	2	3
15:00-15:59	0	0	0	0	0	0	2	2
16:00-16:59	1	1	0	1	0	2	0	5
17:00-17:59	0	1	0	1	0	0	0	2
18:00-18:59	1	0	0	0	0	1	0	2
19:00-19:59	1	0	0	0	1	1	0	3
20:00-20:59	0	0	0	0	1	0	1	2
21:00-21:59	0	2	0	0	0	0	2	4
22:00-22:59	0	0	1	1	1	0	0	3
23:00-23:59	1	0	0	0	0	0	0	1
Total	7	13	5	7	5	8	8	53

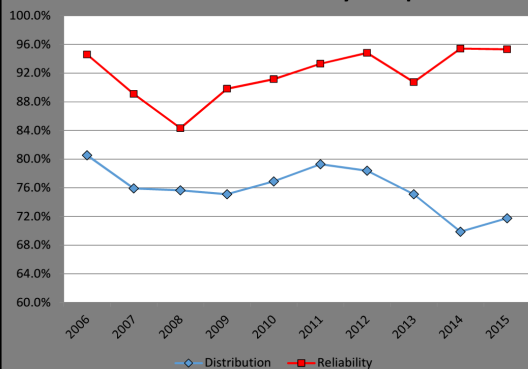
**Kalamazoo Ave. Station
2015 Incidents in District**



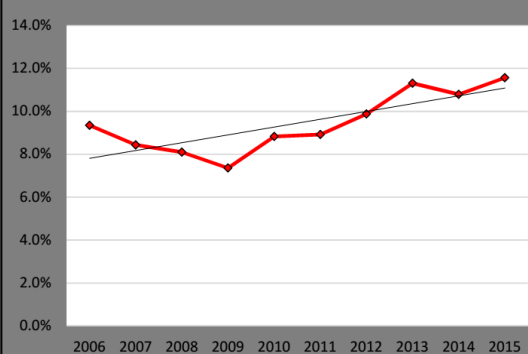
**Kalamazoo Ave. Station
2015 Apparatus Responses**



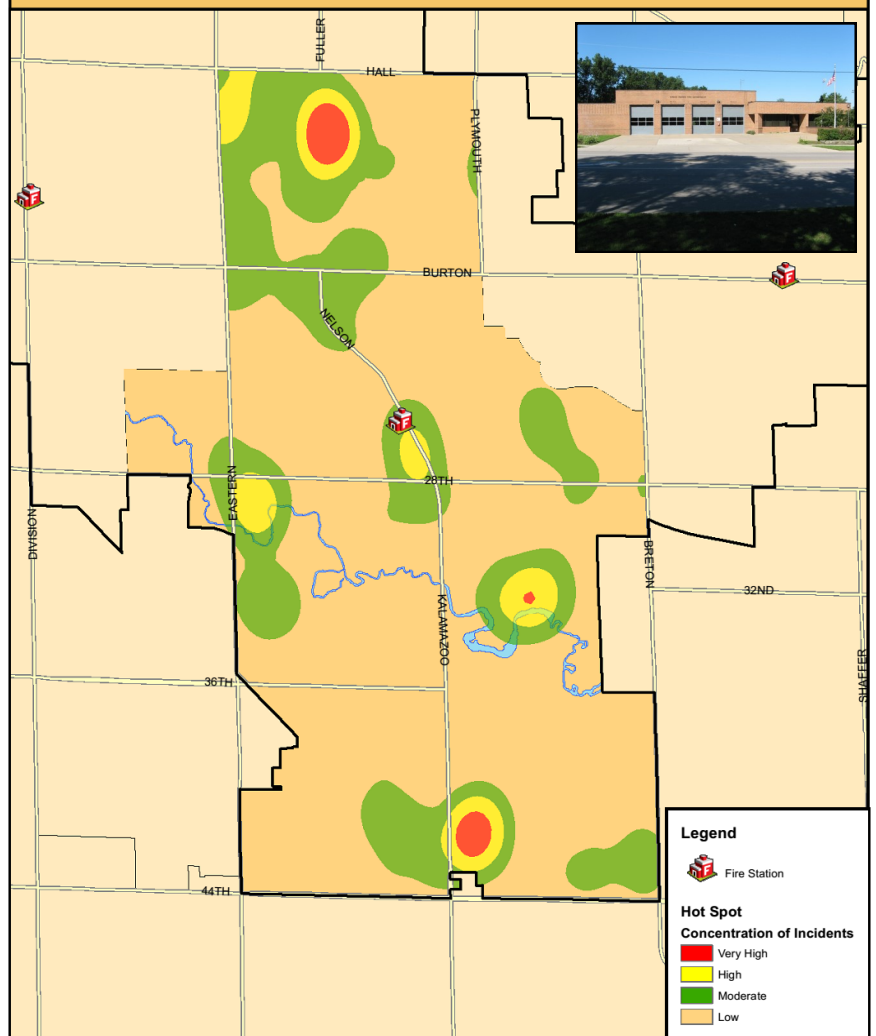
**Kalamazoo Ave. Station
Distribution & Reliability Compliance**



**Kalamazoo Ave. Station
Simultaneous Calls**



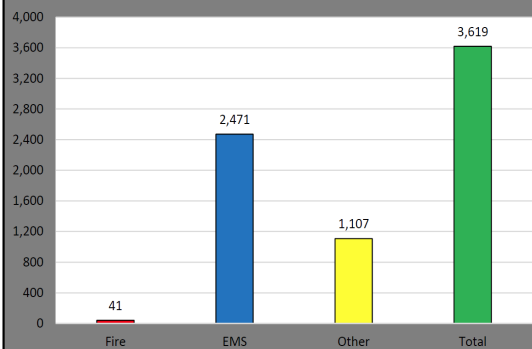
Hot Spot Map of Kalamazoo Avenue Fire Station's 2015 Incidents



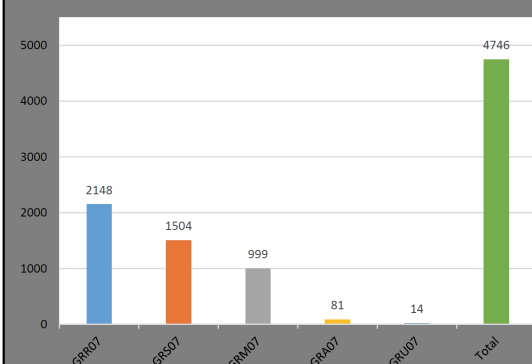
Temporal Analysis - 2015 EMS Kalamazoo								
Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
00:00-00:59	11	11	6	10	9	6	5	58
01:00-01:59	10	10	7	5	8	8	5	53
02:00-02:59	8	1	4	5	7	6	7	38
03:00-03:59	8	5	4	5	8	5	14	49
04:00-04:59	16	3	3	10	9	6	7	54
05:00-05:59	8	9	3	7	4	6	5	42
06:00-06:59	7	6	6	7	7	5	6	44
07:00-07:59	11	14	13	9	3	4	8	62
08:00-08:59	5	12	14	15	11	12	7	76
09:00-09:59	10	14	16	23	21	12	6	102
10:00-10:59	16	14	11	13	13	17	17	101
11:00-11:59	13	18	7	13	12	18	9	90
12:00-12:59	12	25	18	16	17	16	13	117
13:00-13:59	16	17	14	16	17	12	9	101
14:00-14:59	17	16	17	5	14	16	12	97
15:00-15:59	13	14	18	10	13	8	16	92
16:00-16:59	13	21	14	9	12	17	12	98
17:00-17:59	10	14	15	20	13	10	18	100
18:00-18:59	14	18	15	12	9	14	12	94
19:00-19:59	16	15	7	22	8	15	10	93
20:00-20:59	13	17	13	12	16	13	11	95
21:00-21:59	12	12	4	10	12	13	8	71
22:00-22:59	7	18	19	13	10	12	18	97
23:00-23:59	6	8	7	12	7	11	6	57
Total	272	312	255	279	260	262	241	1,881

Temporal Analysis - 2015 Fire Kalamazoo								
Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
00:00-00:59	0	1	0	0	2	0	1	4
01:00-01:59	0	0	1	0	0	0	0	1
02:00-02:59	0	0	0	0	0	1	1	2
03:00-03:59	0	1	1	0	0	0	2	4
04:00-04:59	1	0	1	0	0	0	1	3
05:00-05:59	0	0	1	0	0	0	0	1
06:00-06:59	0	0	0	1	0	0	0	1
07:00-07:59	0	0	0	1	0	1	0	2
08:00-08:59	1	0	0	0	1	0	1	3
09:00-09:59	0	1	0	0	0	0	0	1
10:00-10:59	0	2	0	1	0	0	1	4
11:00-11:59	2	1	0	2	1	1	0	7
12:00-12:59	1	0	0	1	0	0	0	2
13:00-13:59	0	0	0	0	0	1	1	2
14:00-14:59	1	0	1	1	2	1	0	6
15:00-15:59	0	0	0	0	1	1	3	5
16:00-16:59	0	1	0	1	1	0	2	5
17:00-17:59	1	2	0	0	0	0	0	3
18:00-18:59	1	0	0	1	1	1	0	4
19:00-19:59	1	0	1	0	0	0	2	4
20:00-20:59	0	0	2	0	0	1	0	3
21:00-21:59	1	0	0	1	0	0	0	2
22:00-22:59	0	0	0	0	0	0	0	0
23:00-23:59	2	0	1	0	0	1	1	5
Total	12	9	9	10	9	9	16	74

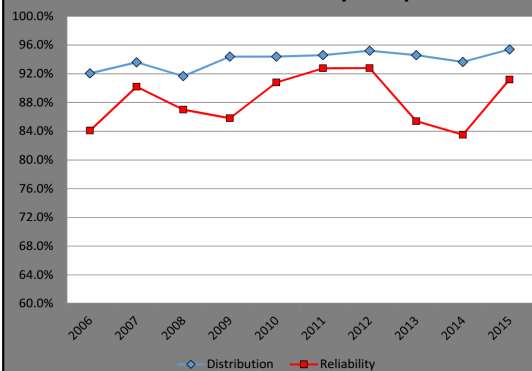
LaGrave Ave. Station 2015 Incidents in District



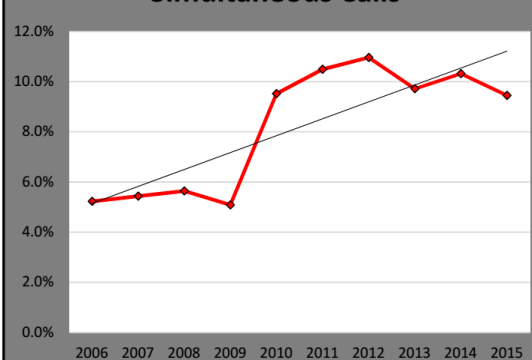
LaGrave Ave. Station 2015 Apparatus Responses



LaGrave Ave. Station Distribution & Reliability Compliance



LaGrave Ave. Station Simultaneous Calls



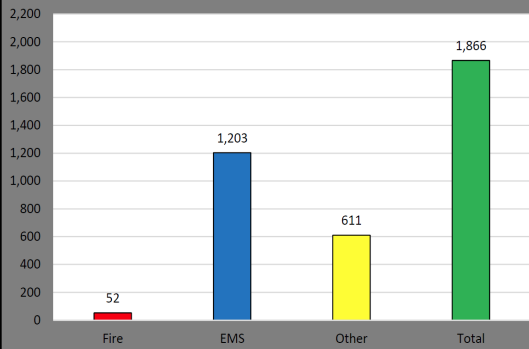
Hot Spot Map of LaGrave Avenue Fire Station's 2015 Incidents



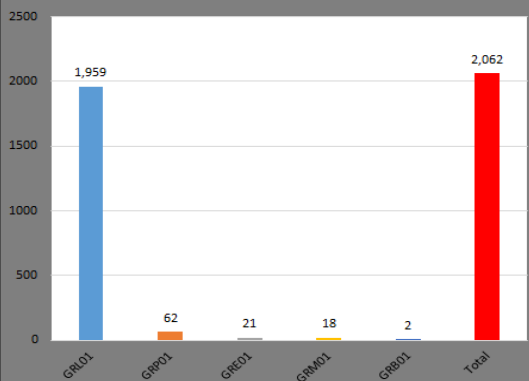
Temporal Analysis - 2015 EMS LaGrave								
Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
00:00-00:59	18	4	11	10	9	9	17	78
01:00-01:59	28	3	3	6	10	16	19	85
02:00-02:59	14	6	4	7	9	5	20	65
03:00-03:59	11	6	7	3	10	4	6	47
04:00-04:59	9	3	3	1	3	5	6	30
05:00-05:59	6	3	3	8	4	4	6	34
06:00-06:59	8	4	3	9	4	3	6	37
07:00-07:59	7	8	10	7	6	12	10	60
08:00-08:59	8	11	8	7	14	9	15	72
09:00-09:59	8	13	8	11	17	11	11	79
10:00-10:59	6	19	20	18	18	22	17	120
11:00-11:59	17	21	17	19	24	12	11	121
12:00-12:59	16	20	22	21	21	20	23	143
13:00-13:59	18	20	25	18	24	22	21	148
14:00-14:59	15	20	20	21	16	23	24	139
15:00-15:59	22	18	26	20	17	17	15	135
16:00-16:59	10	21	24	28	22	20	15	140
17:00-17:59	18	17	17	22	19	23	18	134
18:00-18:59	27	26	20	20	21	18	23	155
19:00-19:59	15	30	20	24	30	22	25	166
20:00-20:59	22	24	23	22	25	15	23	154
21:00-21:59	17	21	15	23	12	23	19	130
22:00-22:59	11	20	16	14	14	22	20	117
23:00-23:59	8	9	10	11	11	18	15	82
Total	339	347	335	350	360	355	385	2,471

Temporal Analysis - 2015 Fire LaGrave								
Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
00:00-00:59	0	0	0	1	0	0	0	1
01:00-01:59	0	1	0	1	0	0	0	2
02:00-02:59	0	0	0	0	0	0	0	0
03:00-03:59	1	0	1	0	0	0	2	4
04:00-04:59	0	0	0	0	0	0	0	0
05:00-05:59	0	0	0	0	0	0	1	1
06:00-06:59	1	0	0	0	0	0	0	1
07:00-07:59	0	0	1	0	0	0	0	1
08:00-08:59	0	1	0	0	0	0	0	1
09:00-09:59	0	0	0	1	0	0	0	1
10:00-10:59	0	0	0	0	0	1	0	1
11:00-11:59	0	0	1	0	0	0	0	1
12:00-12:59	1	0	0	1	0	0	0	2
13:00-13:59	0	0	0	0	2	2	0	4
14:00-14:59	0	0	0	1	1	0	0	2
15:00-15:59	1	1	1	0	1	0	0	4
16:00-16:59	0	2	0	0	0	0	0	2
17:00-17:59	0	2	1	0	0	0	0	3
18:00-18:59	0	0	0	0	1	0	2	3
19:00-19:59	0	0	0	1	0	0	0	1
20:00-20:59	0	0	0	1	0	0	0	1
21:00-21:59	0	0	1	0	0	1	0	2
22:00-22:59	2	0	0	0	0	0	0	2
23:00-23:59	0	0	0	1	0	0	0	1
Total	6	7	6	8	5	4	5	41

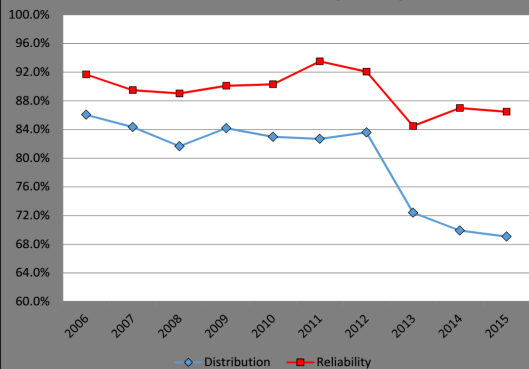
Leonard St. Station 2015 Incidents in District



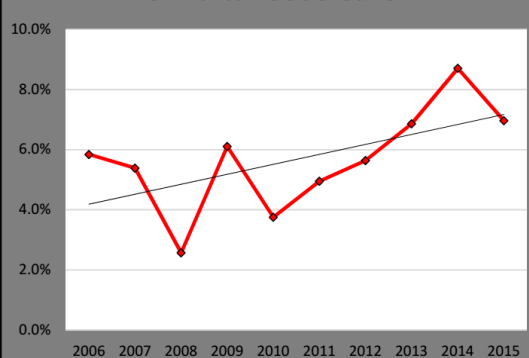
Leonard St. Station 2015 Apparatus Responses



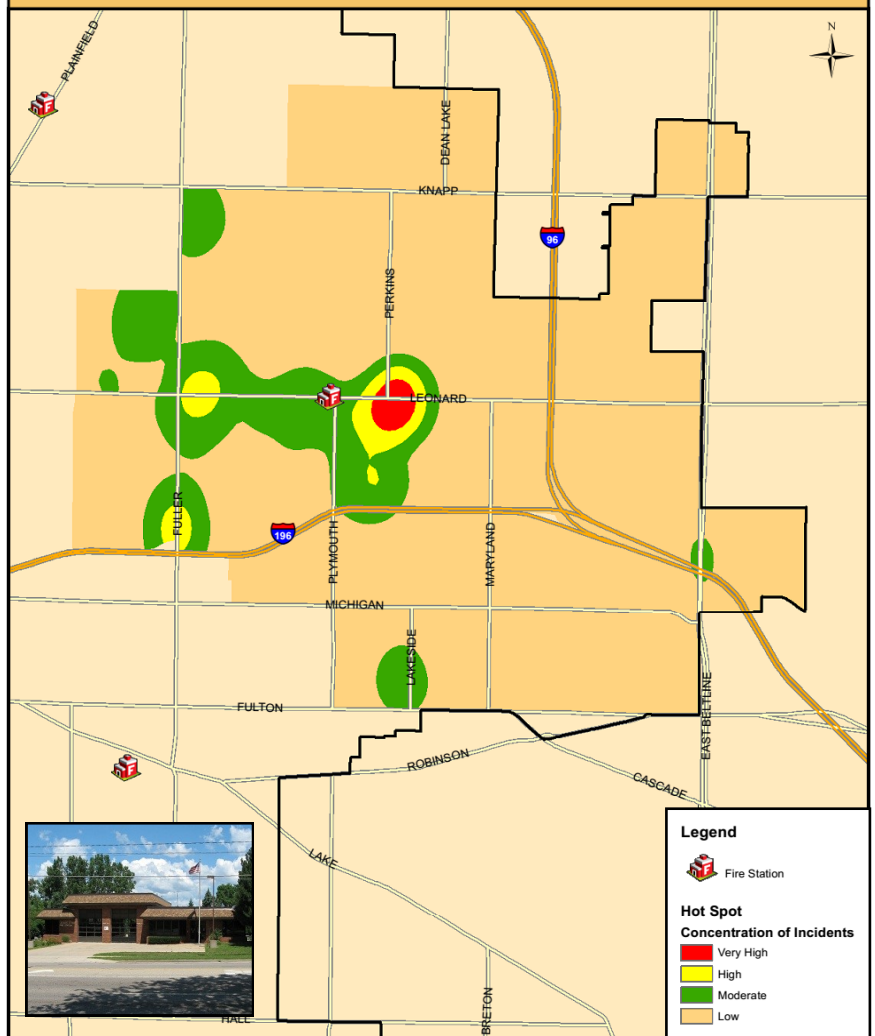
Leonard St. Station Distribution & Reliability Compliance



Leonard St. Station Simultaneous Calls



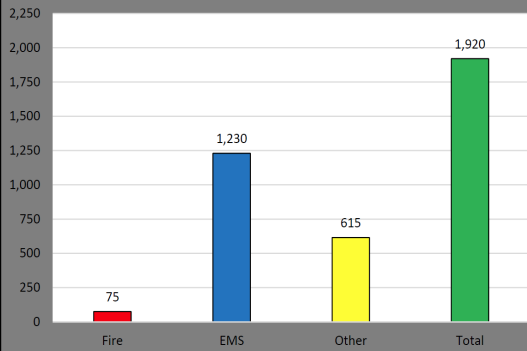
Hot Spot Map of Leonard Street Fire Station's 2015 Incidents



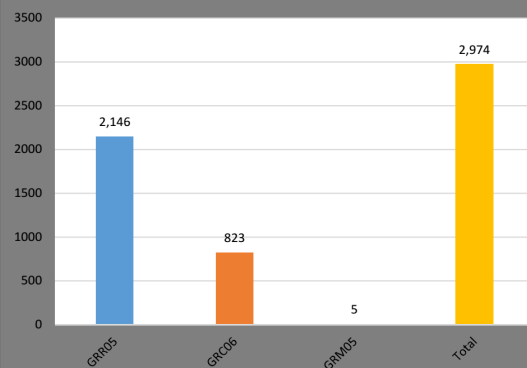
Temporal Analysis - 2015 EMS Leonard								
Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
00:00-00:59	9	7	7	5	2	5	4	39
01:00-01:59	7	8	3	4	5	3	8	38
02:00-02:59	9	3	7	2	5	7	4	37
03:00-03:59	0	5	4	1	1	3	3	17
04:00-04:59	2	2	3	2	5	3	4	21
05:00-05:59	2	1	5	2	4	2	4	20
06:00-06:59	3	8	8	5	8	8	5	45
07:00-07:59	8	7	8	6	4	10	4	47
08:00-08:59	7	12	8	9	7	9	7	59
09:00-09:59	6	9	16	13	13	15	12	84
10:00-10:59	6	7	18	8	9	9	11	68
11:00-11:59	14	12	13	9	11	9	6	74
12:00-12:59	7	6	5	9	11	9	6	53
13:00-13:59	8	6	11	6	11	14	2	58
14:00-14:59	6	10	12	13	12	9	10	72
15:00-15:59	11	9	9	11	6	7	4	57
16:00-16:59	8	6	15	8	10	6	6	59
17:00-17:59	7	8	11	16	10	7	10	69
18:00-18:59	5	13	4	7	12	8	5	54
19:00-19:59	8	5	10	15	5	7	6	56
20:00-20:59	4	7	6	8	10	15	8	58
21:00-21:59	7	10	5	7	5	10	5	49
22:00-22:59	4	4	4	2	5	5	6	30
23:00-23:59	4	3	10	3	6	9	4	39
Total	152	168	202	171	177	189	144	1,203

Temporal Analysis - 2015 Fire Leonard								
Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
00:00-00:59	0	0	0	1	0	0	0	1
01:00-01:59	1	0	0	0	0	0	0	1
02:00-02:59	0	0	0	0	0	0	0	0
03:00-03:59	0	0	0	0	0	0	0	0
04:00-04:59	0	0	0	0	0	0	0	0
05:00-05:59	0	0	0	0	0	0	0	0
06:00-06:59	0	0	0	0	0	0	0	0
07:00-07:59	0	0	0	0	0	0	0	0
08:00-08:59	0	0	2	0	0	1	0	3
09:00-09:59	2	0	0	0	0	1	0	3
10:00-10:59	0	0	1	0	0	0	0	1
11:00-11:59	0	1	1	0	0	0	1	3
12:00-12:59	0	0	0	0	1	0	0	1
13:00-13:59	0	0	1	0	0	1	1	3
14:00-14:59	3	0	1	0	0	1	0	5
15:00-15:59	0	0	1	1	2	1	0	5
16:00-16:59	1	0	0	0	0	0	0	1
17:00-17:59	2	1	0	1	0	2	0	6
18:00-18:59	1	1	1	0	0	3	0	6
19:00-19:59	1	0	1	1	0	0	0	3
20:00-20:59	3	0	0	1	0	1	0	5
21:00-21:59	2	0	0	1	1	0	0	4
22:00-22:59	0	0	0	1	0	0	0	1
23:00-23:59	0	0	0	0	0	0	0	0
Total	16	3	9	7	4	11	2	52

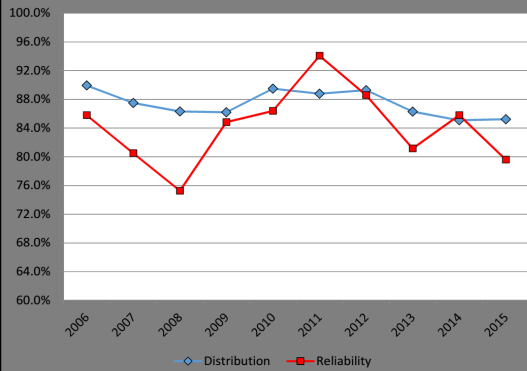
Monroe Ave. Station 2015 Incidents in District



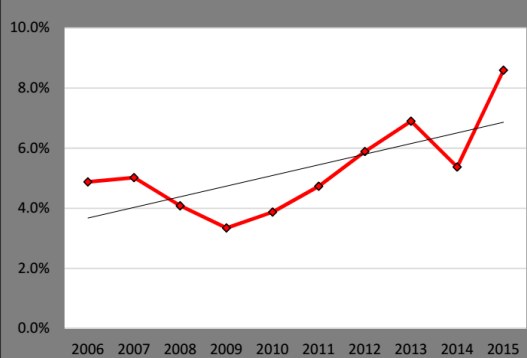
Monroe Ave. Station 2015 Apparatus Responses



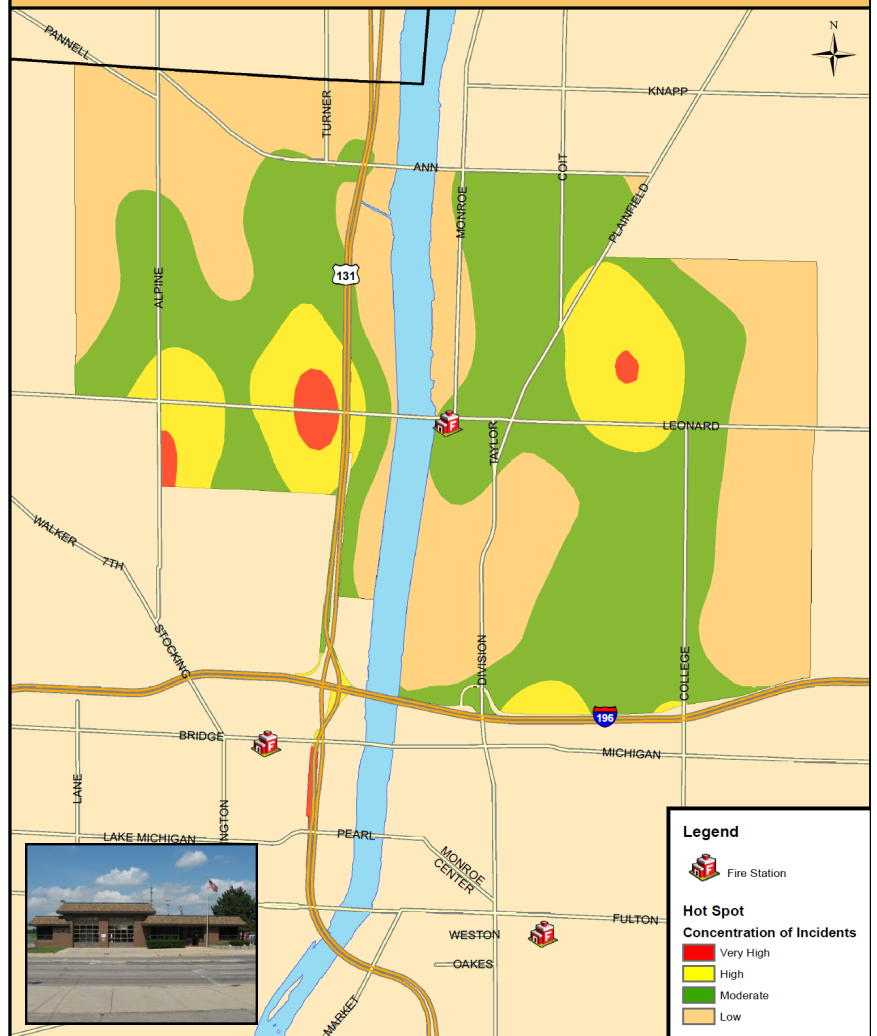
Monroe Ave. Station Distribution & Reliability Compliance



Monroe Ave. Station Simultaneous Calls



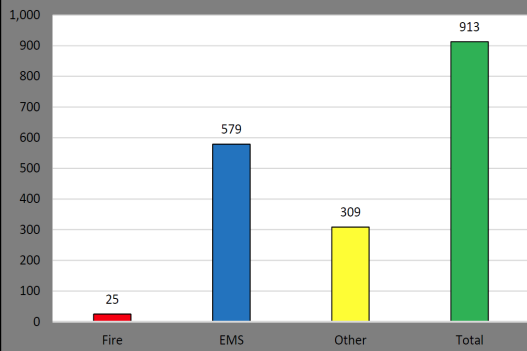
Hot Spot Map of Monroe Avenue Fire Station's 2015 Incidents



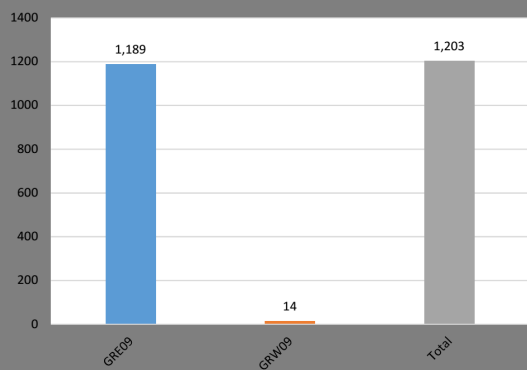
Temporal Analysis - 2015 EMS Monroe									
Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total	
00:00-00:59	10	5	8	5	7	8	9	52	
01:00-01:59	11	7	5	5	7	4	6	45	
02:00-02:59	8	6	2	11	1	3	5	36	
03:00-03:59	4	2	5	5	1	3	3	23	
04:00-04:59	2	3	3	3	5	3	3	22	
05:00-05:59	3	2	5	5	3	3	3	24	
06:00-06:59	4	5	4	6	6	2	1	28	
07:00-07:59	3	5	3	6	7	6	4	34	
08:00-08:59	5	7	6	8	5	4	3	38	
09:00-09:59	5	4	11	7	6	7	6	46	
10:00-10:59	7	13	8	8	7	8	6	57	
11:00-11:59	10	8	9	7	15	7	7	63	
12:00-12:59	5	5	8	7	11	2	9	47	
13:00-13:59	9	14	6	12	12	7	11	71	
14:00-14:59	9	9	10	8	16	11	11	74	
15:00-15:59	10	10	11	5	12	8	4	60	
16:00-16:59	7	7	15	9	12	4	7	61	
17:00-17:59	11	6	10	3	11	13	9	63	
18:00-18:59	7	16	10	9	15	9	9	75	
19:00-19:59	9	9	10	8	9	9	12	66	
20:00-20:59	3	8	9	11	8	14	14	67	
21:00-21:59	6	16	5	12	13	6	7	65	
22:00-22:59	5	11	8	8	11	14	16	73	
23:00-23:59	7	4	7	6	4	7	5	40	
Total	160	182	178	174	204	162	170	1,230	

Temporal Analysis - 2015 Fire Monroe									
Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total	
00:00-00:59	0	0	0	0	0	0	0	0	
01:00-01:59	0	1	0	0	0	1	0	2	
02:00-02:59	1	0	0	0	0	0	0	1	
03:00-03:59	0	0	0	0	0	0	1	1	
04:00-04:59	0	0	0	0	1	0	0	1	
05:00-05:59	0	0	0	1	1	1	0	3	
06:00-06:59	0	0	0	0	0	0	0	0	
07:00-07:59	0	1	0	1	0	0	0	2	
08:00-08:59	0	0	0	1	1	1	0	3	
09:00-09:59	0	1	0	0	2	0	1	4	
10:00-10:59	0	1	0	0	0	0	0	1	
11:00-11:59	1	0	0	0	0	0	2	3	
12:00-12:59	0	1	1	0	0	0	0	2	
13:00-13:59	1	0	1	0	2	0	0	4	
14:00-14:59	0	1	1	0	0	0	0	2	
15:00-15:59	0	0	1	2	0	2	0	5	
16:00-16:59	2	0	1	1	2	0	2	8	
17:00-17:59	2	2	0	3	0	1	0	8	
18:00-18:59	1	0	0	2	0	0	1	4	
19:00-19:59	0	0	1	1	1	0	0	3	
20:00-20:59	1	0	2	1	1	1	0	6	
21:00-21:59	0	0	1	3	0	1	0	5	
22:00-22:59	1	0	0	0	0	1	0	2	
23:00-23:59	0	2	1	1	1	0	0	5	
Total	10	10	10	17	12	9	7	75	

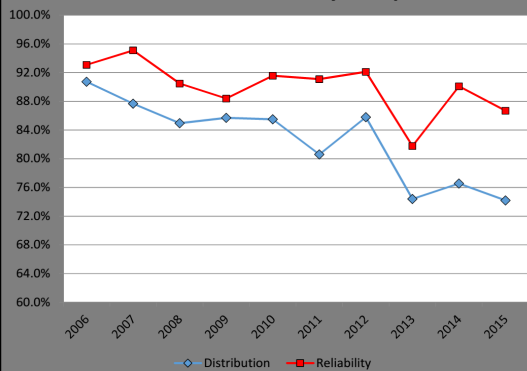
**Plainfield Ave. Station
2015 Incidents in District**



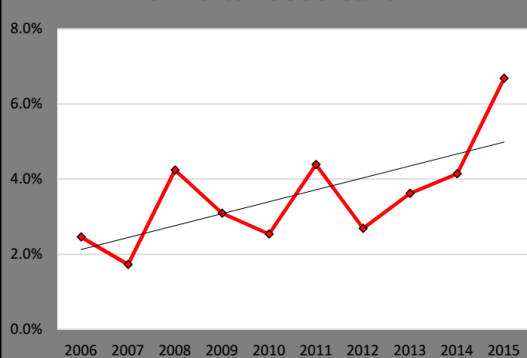
**Plainfield Ave. Station
2015 Apparatus Responses**



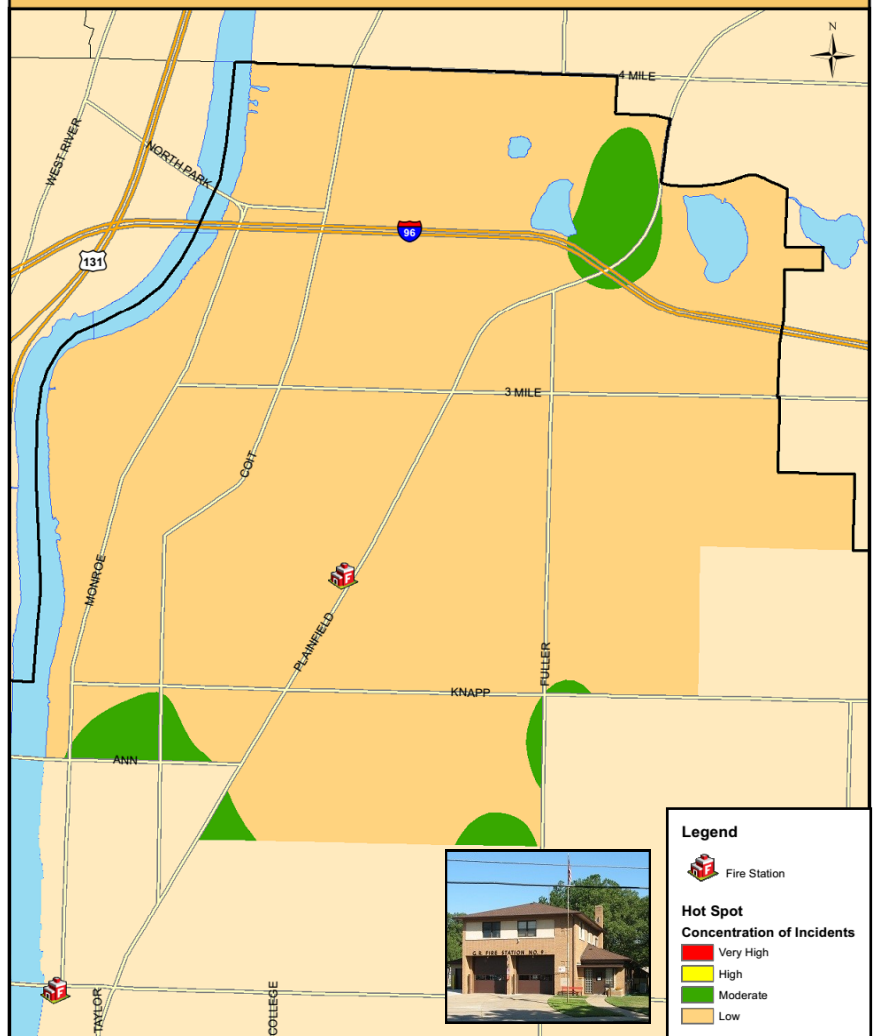
**Plainfield Ave. Station
Distribution & Reliability Compliance**



**Plainfield Ave. Station
Simultaneous Calls**



Hot Spot Map of Plainfield Avenue Fire Station's 2015 Incidents

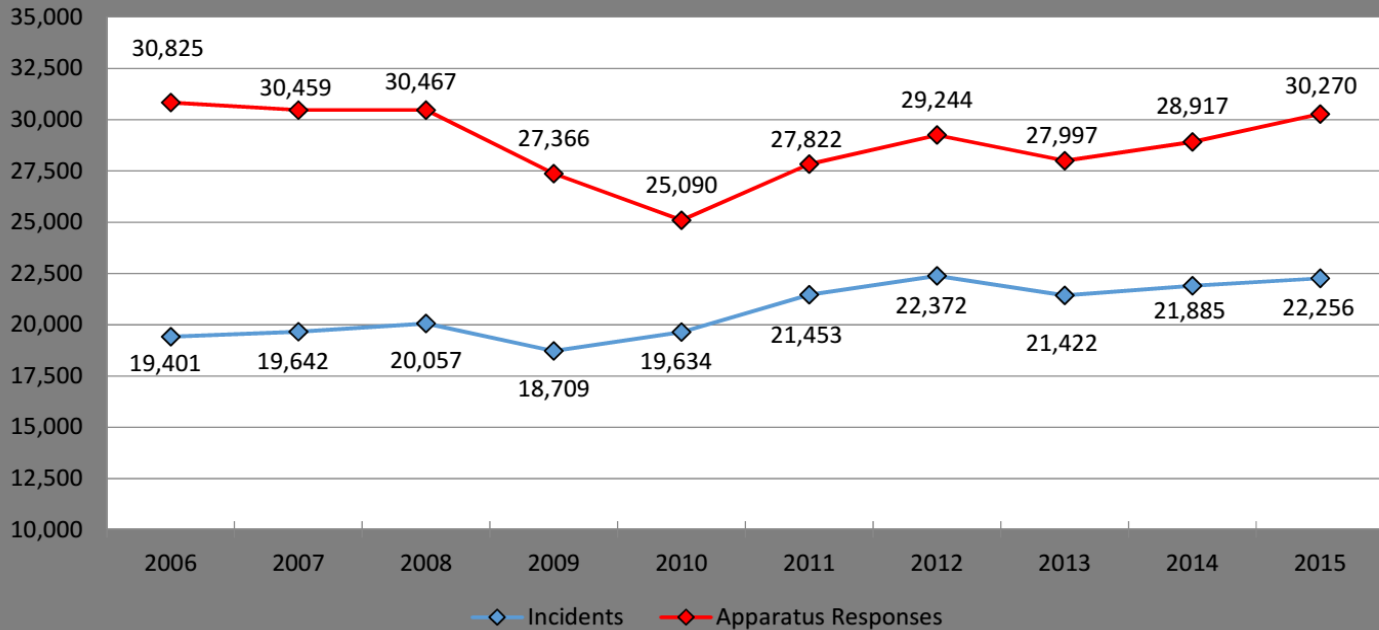


Temporal Analysis - 2015 EMS Plainfield								
Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
00:00-00:59	5	1	2	1	5	3	1	18
01:00-01:59	4	3	2	1	2	3	6	21
02:00-02:59	3	2	1	1	3	3	3	16
03:00-03:59	2	2	0	2	0	1	4	11
04:00-04:59	0	2	2	3	2	1	1	11
05:00-05:59	5	0	1	2	2	3	4	17
06:00-06:59	4	1	0	3	1	3	3	15
07:00-07:59	2	5	4	3	3	1	8	26
08:00-08:59	4	6	6	1	0	2	2	21
09:00-09:59	5	7	5	1	9	2	5	34
10:00-10:59	7	4	5	3	6	6	3	34
11:00-11:59	5	5	4	3	4	8	2	31
12:00-12:59	4	4	6	4	7	3	4	32
13:00-13:59	0	3	5	3	6	2	5	24
14:00-14:59	5	7	6	0	6	8	5	37
15:00-15:59	3	3	3	4	2	8	4	27
16:00-16:59	2	3	1	3	3	7	3	22
17:00-17:59	4	4	4	3	4	1	4	24
18:00-18:59	4	8	2	1	3	7	8	33
19:00-19:59	3	6	6	7	3	5	4	34
20:00-20:59	5	6	4	3	7	6	3	34
21:00-21:59	1	3	0	2	4	5	4	19
22:00-22:59	2	0	0	5	3	3	3	16
23:00-23:59	2	4	1	2	5	5	3	22
Total	81	89	70	61	90	96	92	579

Temporal Analysis - 2015 Fire Plainfield								
Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
00:00-00:59	0	0	0	1	0	0	0	1
01:00-01:59	0	0	0	0	1	0	0	1
02:00-02:59	0	0	0	0	0	0	0	0
03:00-03:59	0	0	0	0	0	0	0	0
04:00-04:59	0	0	0	0	0	1	0	1
05:00-05:59	0	0	0	0	0	0	0	0
06:00-06:59	0	0	0	0	0	0	1	1
07:00-07:59	1	0	0	0	0	0	0	1
08:00-08:59	0	0	1	0	0	0	0	1
09:00-09:59	0	0	0	0	0	0	0	0
10:00-10:59	0	1	0	0	0	0	0	1
11:00-11:59	0	1	0	0	0	0	0	1
12:00-12:59	0	0	0	0	0	0	0	0
13:00-13:59	1	0	0	0	0	0	0	1
14:00-14:59	0	0	0	0	1	0	0	1
15:00-15:59	0	0	0	0	1	1	0	2
16:00-16:59	1	0	0	0	1	1	0	3
17:00-17:59	0	0	0	0	0	1	0	1
18:00-18:59	1	1	0	0	0	0	0	2
19:00-19:59	1	1	0	0	0	0	0	2
20:00-20:59	1	0	0	0	0	1	0	2
21:00-21:59	0	0	0	0	0	0	0	0
22:00-22:59	0	0	0	1	0	2	0	3
23:00-23:59	0	0	0	0	0	0	0	0
Total	6	4	1	2	4	7	1	25

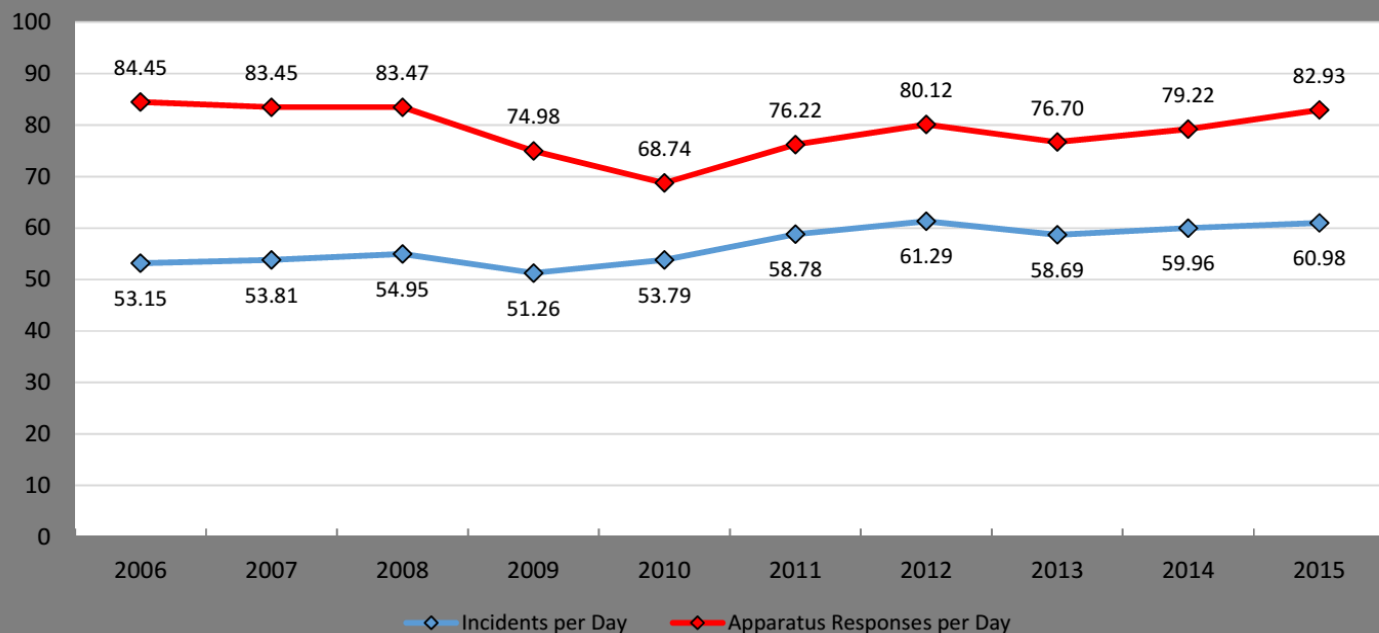
2015 Overall Performance Statistics

Total Incident & Apparatus Activity Summary



Emergency incidents ticked up by 375 in 2015, for an increase of 1.70%. Apparatus responses rose by 4.68%, to 30,270. These statistics conform to a continuing pattern of increasing call volumes.

Daily Incident & Apparatus Response Activity



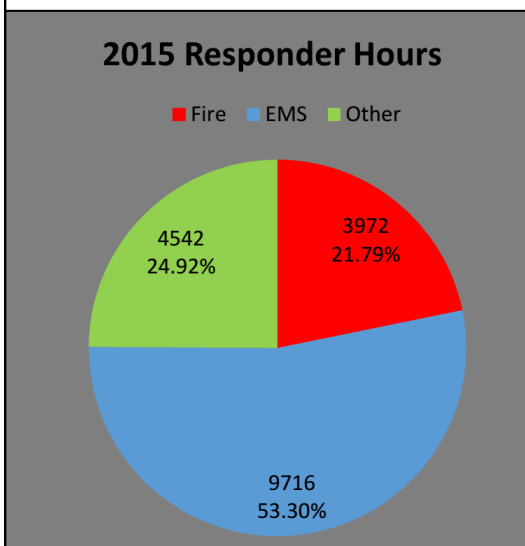
Total Incidents by Type	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Fires	813	856	716	658	689	648	751	557	580	617
Overpressure/Rupture	39	66	48	46	36	43	36	36	45	43
EMS	13,425	13,328	13,864	12,649	12,601	13,672	13,749	13,085	13,510	14,792
Hazardous Conditions	1,035	982	1,108	686	747	791	647	1,035	990	898
Service Call	995	988	864	1,263	1,653	1,921	2,366	2,037	2,003	1,368
Good Intent	1,639	1,911	1,867	1,970	2,294	2,679	3,193	3,085	3,143	2,976
False Alarm/Calls	1,421	1,494	1,554	1,424	1,581	1,670	1,609	1,579	1,600	1,555
Severe Weather	14	2	20	5	16	12	2	3	9	4
Special Incident	20	13	16	8	17	17	19	5	5	3
Total	19,401	19,640	20,057	18,709	19,634	21,453	22,372	21,422	21,885	22,256

2015 saw a large increase in the amount of EMS incidents. Improved incident reporting may account for some of this increase, as evidenced by the concomitant decrease in service calls and good intent alarms. The remainder of the incident types displayed predictable changes in the incident call volumes.

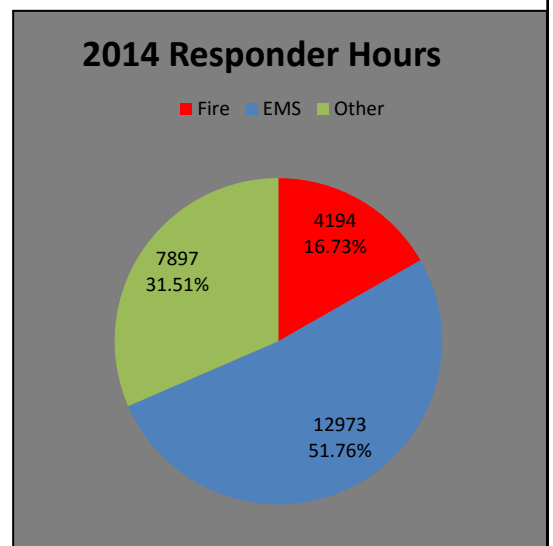


Total Incidents by Type	% Change from 2013 to 2014	% of Total Incidents 2014	% Change from 2014 to 2015	% of Total Incidents 2015
Fires	4.13%	2.65%	6.38%	2.77%
Overpressure/Rupture	25.00%	0.21%	-4.44%	0.19%
EMS	3.25%	61.73%	9.49%	66.46%
Hazardous Conditions	-4.35%	4.52%	-9.29%	4.03%
Service Call	-1.67%	9.15%	-31.70%	6.15%
Good Intent	1.88%	14.36%	-5.31%	13.37%
False Alarm/Calls	1.33%	7.31%	-2.81%	6.99%
Severe Weather	200.00%	0.04%	-55.56%	0.02%
Special Incident	0.00%	0.02%	-40.00%	0.01%
Total	2.16%	100.00%	1.70%	100.00%

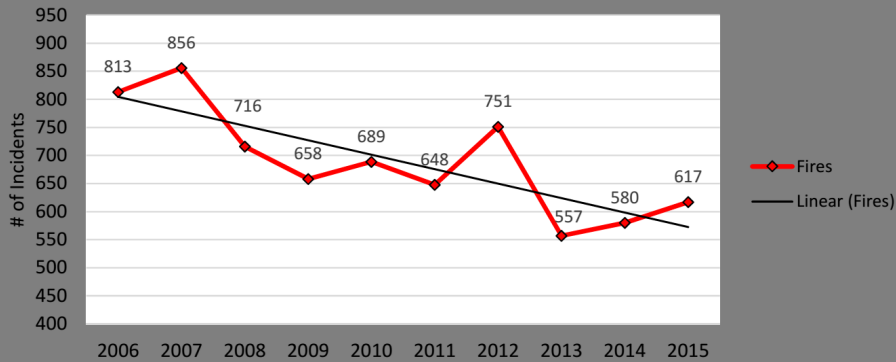
EMS incidents accounted for 66.46% of the emergency incidents in the city, and accounted for



53.30% of the time spent on scene, compared with 51.76% last year. Fires were responsible for 2.77% of the total incident volume, but still required 21.79% of deployed time for effective mitigation, up from 16.73% last year.



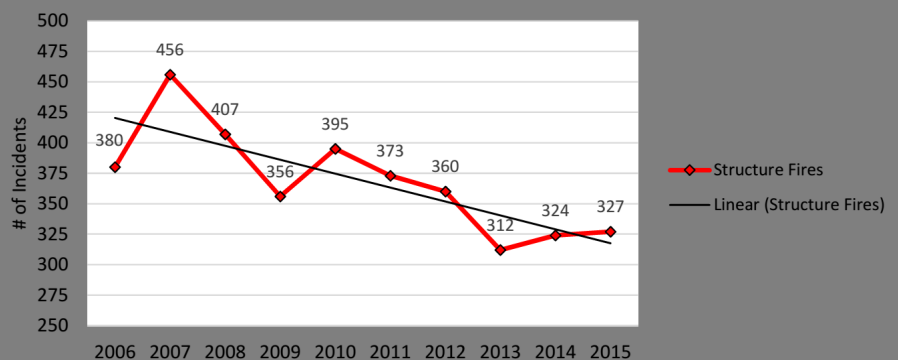
GRFD All Fire Incidents 2006-2015



Total fire incidents (structures, cars, dumpsters, brush, etc.) were at 617 for 2015, a slight increase from 2014, but continuing the downward trend over the last decade.

2015 also saw a small increase in structure fires, rising three to 327. However, these numbers also continue a decade long trend of decreasing occurrences. This correlates with increased fire prevention efforts by our personnel including both commercial and residential programs.

GRFD Structure Fire Incidents 2006-2015



2015 Simultaneous Structure Fires

Description	Count	%
2 Structure Fires at Same Time	17	5.20%
3 Structure Fires at Same Time	0	0
4 Structure Fires at Same Time	0	0

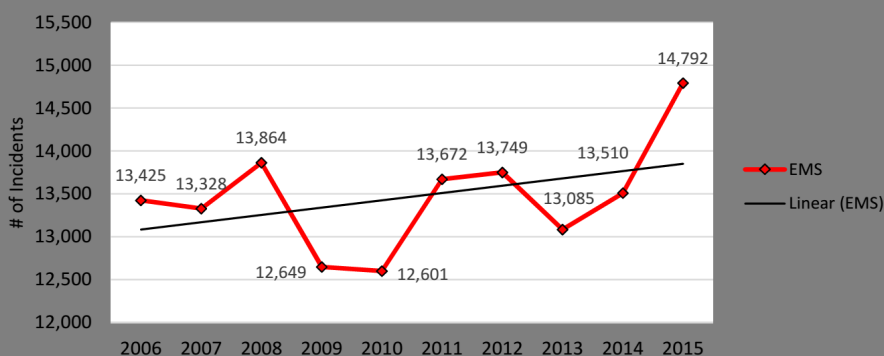
On any given day, there is an 89.59% chance of a structure fire occurring somewhere in

2015 Structure Fires

# Per Day	Frequency	Total
1	129	129
2	52	104
3	26	78
4	4	16
		327

the city of Grand Rapids. Although the average number of structure fires is below 1 per day, the city still experiences many days during the year with multiple fires. In 2015 this happened 82 times (22.47% of days). There were also 17 days with simultaneous fires, requiring twice the typical amount of resources to provide positive outcomes for citizens.

GRFD EMS Incidents 2006-2015



EMS incidents rose 9.49% to 14,792. EMS accounted for 66.46% of the call volume for the city. Development of the GRFD Standards of Coverage defined critical tasking for events such as cardiac arrests, which led to increased unit deployment for these types of incidents.

Critical Performance Measures

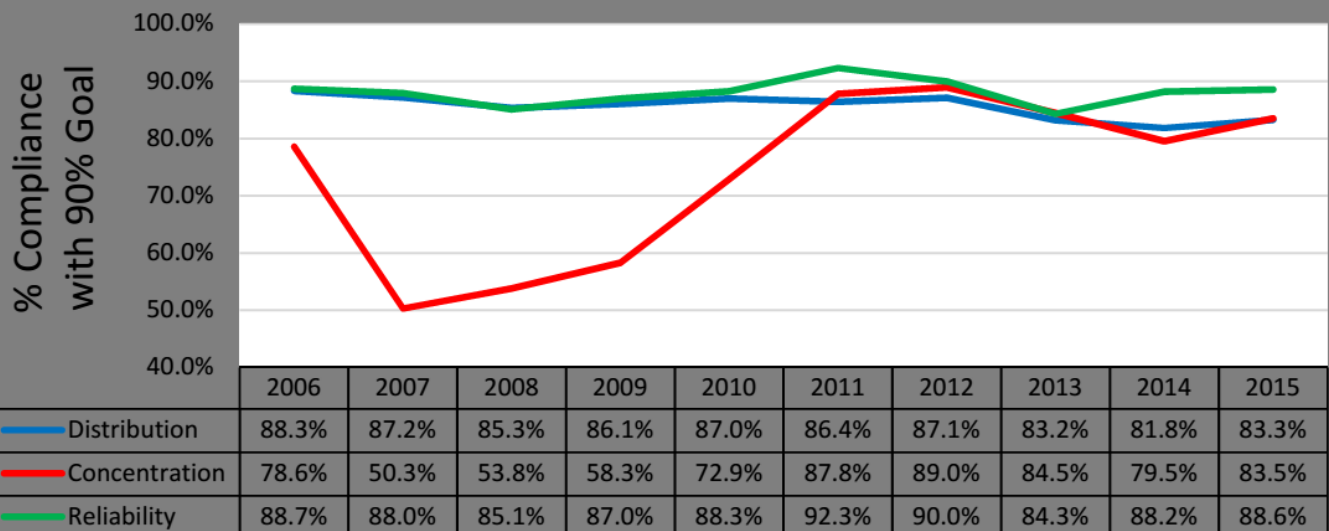
Simultaneous incidents serve as a decision point for both the distribution and concentration of resources. When multiple alarms occur in a single first due district, either a second unit in that district or resources from adjoining districts must be utilized for response. Kalamazoo, Bridge, LaGrave and Monroe districts experienced a high level of concurrent calls, with many other districts seeing a rise in simultaneous calls. 2015 saw simultaneous calls in the city dip slightly from 56.18% to 55.29%.

Simultaneous Call Percentage by Station District										
Station	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Bridge	9.4%	8.4%	8.9%	5.7%	6.9%	9.14%	9.00%	9.07%	9.54%	10.19%
Burton	2.3%	2.8%	2.7%	2.6%	4.2%	4.16%	4.29%	4.85%	4.43%	6.07%
Chester	3.9%	2.4%	4.6%	3.8%	5.1%	6.12%	4.88%	7.69%	8.57%	7.05%
Covell	3.9%	4.0%	2.6%	3.2%	4.3%	6.31%	7.40%	6.52%	7.22%	7.28%
Division	4.1%	3.7%	4.1%	3.7%	6.1%	7.69%	6.72%	8.70%	6.71%	7.18%
Franklin	6.9%	8.3%	10.1%	5.4%	7.6%	6.39%	6.52%	5.03%	5.60%	7.30%
Kalamazoo	9.4%	8.4%	8.1%	7.4%	8.8%	8.92%	9.87%	11.31%	10.79%	11.56%
LaGrave	5.2%	5.4%	5.6%	5.1%	9.5%	10.50%	10.97%	9.72%	10.32%	9.45%
Leonard	5.8%	5.4%	2.6%	6.1%	3.8%	4.95%	5.64%	6.86%	8.70%	6.97%
Monroe	4.9%	5.0%	4.1%	3.3%	3.9%	4.74%	5.89%	6.90%	5.37%	8.59%
Plainfield	2.5%	1.7%	4.2%	3.1%	2.5%	4.39%	2.69%	3.62%	4.14%	6.68%

City Wide Simultaneous	
2006	51.77%
2007	52.88%
2008	53.74%
2009	50.16%
2010	51.94%
2011	54.80%
2012	56.04%
2013	51.81%
2014	56.18%
2015	55.29%

Aligning with the best practices in the fire service and the international accreditation process, the GRFD monitors the distribution, concentration and reliability of the emergency units in service at the unit, fire management zone, first due district and city wide levels. The citywide numbers for 2015 exhibit improvements in all three areas. Distribution, the ability to get our first unit on scene within 6.5 minutes of notification, increased 1.5%. Concentration, the ability to assemble an effective response force, increased the most at 4%. Reliability, the ability for a crew to answer calls within their own district, rose .4%.

Critical Performance Measures 2006 -2015



2015 TEMPORAL ANALYSIS (Depicts time of day/day of week demand)

Temporal Analysis - 2015 All Alarms								
Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
00:00-00:59	150	91	87	94	95	93	125	735
01:00-01:59	151	87	89	69	113	84	120	713
02:00-02:59	126	50	65	66	85	84	122	598
03:00-03:59	90	65	66	75	55	65	97	513
04:00-04:59	81	46	83	62	59	52	64	447
05:00-05:59	75	47	62	67	61	50	61	423
06:00-06:59	77	70	66	65	77	74	72	501
07:00-07:59	88	104	117	94	86	91	74	654
08:00-08:59	91	129	149	133	120	108	107	837
09:00-09:59	107	160	145	146	154	136	120	968
10:00-10:59	125	178	175	157	183	163	152	1,133
11:00-11:59	150	187	168	158	186	172	140	1,161
12:00-12:59	148	165	172	171	165	172	146	1,139
13:00-13:59	157	180	170	169	202	187	147	1,212
14:00-14:59	163	176	177	162	185	187	166	1,216
15:00-15:59	170	189	192	145	173	162	138	1,169
16:00-16:59	162	174	172	186	187	178	158	1,217
17:00-17:59	172	176	182	166	171	197	182	1,246
18:00-18:59	178	208	169	168	171	173	172	1,239
19:00-19:59	156	186	165	173	165	153	155	1,153
20:00-20:59	161	160	168	159	174	188	185	1,195
21:00-21:59	151	168	123	138	137	165	140	1,022
22:00-22:59	109	151	127	145	131	166	163	992
23:00-23:59	99	103	95	116	103	137	120	773
Total	3,137	3,250	3,184	3,084	3,238	3,237	3,126	22,256

Temporal Analysis - 2015 EMS								
Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
00:00-00:59	90	53	58	61	61	62	85	470
01:00-01:59	103	61	52	44	54	58	74	446
02:00-02:59	75	31	45	47	45	48	82	373
03:00-03:59	58	43	44	39	40	38	61	323
04:00-04:59	54	32	34	40	42	35	44	281
05:00-05:59	55	33	40	38	39	34	36	275
06:00-06:59	49	46	46	45	49	47	50	332
07:00-07:59	60	77	84	68	57	68	56	470
08:00-08:59	70	92	99	89	70	75	80	575
09:00-09:59	73	108	114	100	119	93	86	693
10:00-10:59	92	116	130	108	110	116	104	776
11:00-11:59	112	133	105	99	131	116	87	783
12:00-12:59	93	121	126	121	114	118	102	795
13:00-13:59	98	117	117	111	128	119	103	793
14:00-14:59	113	115	111	107	119	131	118	814
15:00-15:59	115	130	132	103	99	99	83	761
16:00-16:59	101	113	121	136	113	122	95	801
17:00-17:59	103	99	116	113	113	121	115	780
18:00-18:59	107	146	108	98	115	111	103	788
19:00-19:59	90	124	112	128	101	100	100	755
20:00-20:59	101	107	110	107	112	121	110	768
21:00-21:59	90	113	71	94	95	115	89	667
22:00-22:59	67	102	90	97	84	103	117	660
23:00-23:59	66	64	63	71	70	90	75	499
Total	2,035	2,176	2,128	2,064	2,080	2,140	2,055	14,678

The single highest run volume for day of the week and hour of the day occurred on Mondays between 6:00 and 7:00 pm, with 208 calls for service. This is up from the 165 calls experienced during this time period in 2014.

EMS responses continue to be higher between 9 am and 10 pm, the time period most people are active and awake. The same Monday evening 6:00 to 7:00 pm time slot was also the busiest for EMS calls.

With most fires occurring in residences, it is no surprise that these alarm levels peak in the evenings when people are home from work and school.

Temporal Analysis - 2015 Fire								
Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
00:00-00:59	3	5	0	4	2	0	3	17
01:00-01:59	5	3	2	3	5	2	3	23
02:00-02:59	3	2	1	1	1	6	1	15
03:00-03:59	1	2	3	0	2	4	6	18
04:00-04:59	3	1	3	2	3	1	1	14
05:00-05:59	1	1	1	2	1	2	1	9
06:00-06:59	2	0	2	2	0	3	2	11
07:00-07:59	2	3	3	2	1	1	1	13
08:00-08:59	1	1	5	1	2	3	1	14
09:00-09:59	5	3	2	4	2	2	2	20
10:00-10:59	2	5	2	1	2	3	2	17
11:00-11:59	3	5	5	3	4	4	3	27
12:00-12:59	6	3	6	3	6	1	0	25
13:00-13:59	8	3	3	2	8	8	4	36
14:00-14:59	7	5	3	5	6	3	4	33
15:00-15:59	5	3	6	4	6	7	9	40
16:00-16:59	6	6	2	5	4	4	8	35
17:00-17:59	12	8	4	7	4	9	2	46
18:00-18:59	7	6	2	5	3	7	6	36
19:00-19:59	4	2	3	7	7	7	6	36
20:00-20:59	6	7	6	8	3	9	5	44
21:00-21:59	8	5	7	7	1	11	6	45
22:00-22:59	4	3	4	4	2	5	1	23
23:00-23:59	4	5	2	3	1	2	3	20
Total	108	87	77	85	76	104	80	617



GRFD 2015 Mutual Aid Chart							
Location	Mutual aid received	Automatic aid received	Total Received	Mutual aid given	Automatic aid given	Other aid given	Total Given
Cannon Township Fire Dept	0	0	0	0	1	0	1
Cascade Fire Dept	0	1	1	0	2	0	2
Cutlerville Fire Dept	0	0	0	1	0	0	1
East Grand Rapids Fire Dept	0	1	1	2	0	0	2
Kentwood Fire Dept	14	27	41	7	8	0	15
Plainfield Township Fire Dept	6	21	27	5	17	1	23
Walker City Fire Dept	9	30	39	4	15	0	19
Wyoming Fire Dept	1	0	1	30	1	1	32
Grand Rapids Township Fire Dept	1	0	1	0	0	0	0
Grand Haven Township Fire Dept	0	1	1	0	0	0	0
Wright-Tallmadge Fire Dept	0	0	0	1	0	0	1
Total Aid Received			112	Total Aid Given			96



**FOR FURTHER INFORMATION ON THIS
ANNUAL REPORT PLEASE CONTACT THE
GRAND RAPIDS FIRE DEPARTMENT
PLANNING DIVISION
616-456-3900**



WWW.GRCITY.US/FIRE